


```

CC treating cancers
XX
80 Sequence 426 AA;
Query Match 100.0; Score 2133; DB 4; Length 426;
Seq. Similarity 100.0; Pos. No. 3, 26-224;
Matches 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MOKLDANVSEEGSGVENVVLLTSTITLALGNLLNVAWVCHQRLKIKNTYFV 60
Cc 2 MOKLDANVSEEGSGVENVVLLTSTITLALGNLLNVAWVCHQRLKIKNTYFV 61
Db 61 SLAFADLLVNLVMPFOALVDQIMTYGEVCLVRSJLVLTASIFPLCISLDRTY 120
Cc 62 SLAFADLLVNLVMPFOALVDQIMTYGEVCLVRSJLVLTASIFPLCISLDRTY 121
Db 121 AICCPVLYNNMTFLALMLAGQWPTFFISFLPMQNNNGIDLERSLQGLQD 180
Cc 122 AICCPVLYNNMTFLALMLAGQWPTFFISFLPMQNNNGIDLERSLQGLQD 181
Db 181 FHAEKRGKQNSSTCYVFWKPVATCSVAFPIFLMLAYTRYVYAKEHAQI 240
Cc 182 FHAEKRGKQNSSTCYVFWKPVATCSVAFPIFLMLAYTRYVYAKEHAQI 241
Db 241 QMLQRAGASSEPGSQDQHSRTHRTETAAKTLCLIMGCFCLWAPFFVTVDFPID 300
Cc 242 QMLQRAGASSEPGSQDQHSRTHRTETAAKTLCLIMGCFCLWAPFFVTVDFPID 301
Db 301 YTVPGQWTAFLWJYNSGLNPLFYATFNKSFRAFIILCCDDRYRPSILQGVTPC 360
Cc 302 YTVPGQWTAFLWJYNSGLNPLFYATFNKSFRAFIILCCDDRYRPSILQGVTPC 361
Db 361 STTTINGSTVTVDAVECGQWESQCHPPATSPFLVAQPSDT 402
Cc 362 STTTINGSTVTVDAVECGQWESQCHPPATSPFLVAQPSDT 403
Db
RESULT 2
ID AAB59573 standard; protein; 402 AA.
XX
AC AAB59573;
XX
DE Dog 5-HT4(h) receptor; splice variant.
XX
DS Dog 5-HT4(h) receptor; splice variant.
XX
KM Dog1, 5-HT4(h) receptor; 5-hydroxytryptamine; HT; serotonin;
XX oesophageal disorder; asthma; bronchitis; pneumonia;
XX inflammatory; vulvular; systemic mastocytosis; anaphylactic;
XX antiinflammatory; vulnervary; antidiasee gene therapy.
XX
OS Canis familiaris.
XX
XX W0200077199-A1.
XX
XX 21-DEC-2000.
XX
XX 14-JUN-2000; 2000NO-EP005592.
XX
XX 14-JUN-1999; 99GB-00013850.
XX
XX (JNC) JANSSEN PHARM NV.
XX
XX Bender B, Pindon AN, Van Oers IP, Jurzak M, Luyten WHML;
XX
XX WPT, 2001-071220/08.
XX
XX X-FDD; AN2398.
XX
XX Novel human 5-HT4 receptor splice variant useful for treating heartburn,
XX reflux, esophagitis, Barrett's esophagus, esophageal cancer, achalasia,
XX esophageal stenosis and esophageal spasms.
XX

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PS Diaconoure; Pig 1B; 64pp; English.
XX
Cc The present sequence is the canine 5-hydroxytryptamine (HT)4(h)
Cc (serotonin) receptor protein. The human HT4(h) receptor protein is useful
Cc for the treatment of a variety of disorders, including: Barrett's
Cc esophagus, esophageal cancer, achalasia, esophageal stenosis,
Cc esophageal spasms, esophageal hiatal hernia or other esophageal
Cc motility disorders, esophageal irritation, such as asthma, (broncho)
Cc bronchospasms, esophageal cancer, esophageal cancer, esophageal
Cc cancer, irritable bowel syndrome, and other diseases of the lower esophageal
Cc sphincter, irritable bowel syndrome, denervation of the esophagus (e.g.
Cc after certain types of trauma or surgery), and disturbances in
Cc esophageal innervation. It is useful for treating cancers
XX
XX Sequence 402 AA;
Query Match 97.0; Score 2069; DB 4; Length 402;
Seq. Similarity 97.0; Pos. No. 3, 26-224;
Matches 389; Conservative 2; Mismatches 11; Indels 0; Gaps 0;
Qy 1 MOKLDANVSEEGSGVENVVLLTSTITLALGNLLNVAWVCHQRLKIKNTYFV 60
Db 1 MOKLDANVSEEGSGVENVVLLTSTITLALGNLLNVAWVCHQRLKIKNTYFV 60
Cc 61 SLAFADLLVNLVMPFOALVDQIMTYGEVCLVRSJLVLTASIFPLCISLDRTY 120
Db 61 SLAFADLLVNLVMPFOALVDQIMTYGEVCLVRSJLVLTASIFPLCISLDRTY 120
Cc 121 AICCPVLYNNMTFLALMLAGQWPTFFISFLPMQNNNGIDLERSLQGLQD 180
Db 121 AICCPVLYNNMTFLALMLAGQWPTFFISFLPMQNNNGIDLERSLQGLQD 180
Cc 181 FHAEKRGKQNSSTCYVFWKPVATCSVAFPIFLMLAYTRYVYAKEHAQI 240
Db 181 LHVIERKRFQNSSTCYVFWKPVATCSVAFPIFLMLAYTRYVYAKEHAQI 240
Cc 241 QMLQRAGASSEPGSQDQHSRTHRTETAAKTLCLIMGCFCLWAPFFVTVDFPID 300
Db 241 QMLQRAGASSEPGSQDQHSRTHRTETAAKTLCLIMGCFCLWAPFFVTVDFPID 300
Cc 301 YTVPGQWTAFLWJYNSGLNPLFYATFNKSFRAFIILCCDDRYRPSILQGVTPC 360
Db 301 YTVPGQWTAFLWJYNSGLNPLFYATFNKSFRAFIILCCDDRYRPSILQGVTPC 360
Cc 361 STTTINGSTVTVDAVECGQWESQCHPPATSPFLVAQPSDT 402
Db 361 STTTINGSTVTVDAVECGQWESQCHPPATSPFLVAQPSDT 402
XX
RESULT 3
ID ADA83842 standard; protein; 388 AA.
XX
XX ADA83842;
XX
XX 20-NOV-2003 (first entry)
XX
XX 30-MAY-2002; 2002MO-IB0004189.
XX
XX human; marker; expressed sequence tag; EST; arabidopsis; tumour;
XX stress-induced phenotype; hyperosmotic stress; colon cancer; immunogen;
XX vaccine.
XX
XX Homo sapiens.
XX
XX W02002103028-A2.
XX
XX 27-DEC-2002.
XX
XX 30-MAY-2002; 2002MO-IB0004189.
XX
XX 30-MAY-2001; 2001US-0293999.
XX
XX 22-OCT-2001; 2001US-0330457P.
XX

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Db 121 ALCQPLVFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 169
Qy 181 FPAEKEKFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 240
Db 170 ---LEKPKFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 226
Qy 241 QMLGRAGASBPQSDQHSRTHRTETAARTLCIMGCFCLCWAPFFVTVVDFPD 300
Db 227 QMLGRAGASBPQSDQHSRTHRTETAARTLCIMGCFCLCWAPFFVTVVDFPD 286
Qy 301 YTVPGQWTFALMGVYNSGLNPLFVAFNLSPFRAPFLIICCDERYRPSILGQTVPC 360
Db 287 YTVPGQWTFALMGVYNSGLNPLFVAFNLSPFRAPFLIICCDERYRPSILGQTVPC 346
Qy 361 STTTINGSTHVLADAVCCQWESQCHPPATSPFLVAAQPSDT 402
Db 347 STTTINGSTHVLADAVCCQWESQCHPPATSPFLVAAQPSDT 388

RESULT 5
ID AAO19909 standard; protein; 388 AA.
XX AAO19909;
XX AAO19909;
XX 11-AUG-2003 (first entry)
XX Human TM4 receptor expression assay probe protein.
XX Human, G-protein coupled receptor; TM4 receptor; receptor; cytosolic;
XX haemostatic; antiasthmatic; cardiac; antidiabetic; anorectic; asthma;
XX CNS disorder; diabetes; obesity; cancer; genito-urinary disorder; probe.
XX Homo sapiens.
XX MO2002101043-A2.
XX 19-DEC-2002.
XX 06-JUN-2002; 2002NO-EP006204.
XX 08-JUN-2001; 2001US-0296447P.
XX 15-NOV-2001; 2001US-0331393P.
XX 17-APR-2002; 2002US-0372811P.
XX (FARB ) BAYER AG.
XX Zhu Z;
XX WPI; 2003-148806/14.
XX Novel polynucleotide encoding G-protein coupled receptor, TM4 receptor,
XX for treating neurological disorders, endocrine disorders,
XX disorders, diabetes, obesity, cancer and genito-urinary disorders.
XX Example 18; Page 138-139; 144pp; English.
XX The present invention provides the protein and coding sequences of human
XX TM4 receptor, which is a G-protein coupled receptor. The sequences are
XX useful in the treatment of neurological disorders, chronic obstructive
XX pulmonary disease, asthma, cardiovascular disorders, central nervous
XX system disorders, endocrine disorders, diabetes, obesity, cancer and
XX disorders. The present sequence is a probe protein used to determine the
XX expression levels of the human TM4 receptor protein
XX Sequence 388 AA;
XX Query Match 95.7%; Score 2042; DB 6; Length 388;
XX Best Local Similarity 96.5%; Pred. No. 2.9e-214;
XX Matches 388; Conservative 0; Mismatches 0; Indels 14; Gaps 1;

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Qy 1 MOKLVNVSSESGSKVAVLSPVSPVLAETLALVLAETLVNVAQVGRLEKIKYNYEV 60
Db 1 MOKLVNVSSESGSKVAVLSPVSPVLAETLALVLAETLVNVAQVGRLEKIKYNYEV 60
Qy 61 SLAPADLLVVLNPFQALIELVODIWIHGGHCLVTSVLSLVLLVTTATNHCCLISLQNY 120
Db 61 SLAPADLLVVLNPFQALIELVODIWIHGGHCLVTSVLSLVLLVTTATNHCCLISLQNY 120
Qy 121 ALCQPLVFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 180
Db 121 ALCQPLVFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 180
Qy 181 FPAEKEKFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 240
Db 170 ---LEKPKFNQNSSTCYVFNKPKVATCSVAFFIPFLMLAYRYRYTAKESHAQI 226
Qy 241 QMLGRAGASBPQSDQHSRTHRTETAARTLCIMGCFCLCWAPFFVTVVDFPD 300
Db 227 QMLGRAGASBPQSDQHSRTHRTETAARTLCIMGCFCLCWAPFFVTVVDFPD 286
Qy 301 YTVPGQWTFALMGVYNSGLNPLFVAFNLSPFRAPFLIICCDERYRPSILGQTVPC 360
Db 287 YTVPGQWTFALMGVYNSGLNPLFVAFNLSPFRAPFLIICCDERYRPSILGQTVPC 346
Qy 361 STTTINGSTHVLADAVCCQWESQCHPPATSPFLVAAQPSDT 402
Db 347 STTTINGSTHVLADAVCCQWESQCHPPATSPFLVAAQPSDT 388

RESULT 6
ID ABB99742 standard; protein; 388 AA.
XX ABB99742;
XX ABB99742;
XX 24-MAR-2003 (first entry)
XX Amino acid sequence of a protein 31% identical to human TM5 receptor.
XX Human; trace amine receptor; TM5 receptor; G protein-coupled receptor;
XX GPCR; chromosome 6; hematological disorder; CNS disorder; asthma;
XX gastrointestinal disorder; cancer; diabetes; obesity;
XX genitourinary disorder.
XX Homo sapiens.
XX MO2002991007-A2.
XX 12-DEC-2002.
XX 06-JUN-2002; 2002NO-EP006206.
XX 07-JUN-2001; 2001US-0296136P.
XX 17-APR-2002; 2002US-0372803P.
XX (FARB ) BAYER AG.
XX Zhu Z;
XX WPI; 2003-140624/13.
XX New polynucleotide encoding a G protein-coupled receptor: polypeptide
XX consisting of 311 amino acids, which is useful for the treatment of
XX gastrointestinal or genitourinary disorders, asthma, cancer, diabetes,
XX obesity.
XX Disclosures; Fig 4; 15pp; English.
XX The present sequence represents a protein which is 31% identical to a
XX human trace amine receptor designated TM5 receptor. TM5 is a G protein-
XX coupled receptor (GPCR) located on human chromosome 6. TM5 receptor and
XX polynucleotides are useful for the preparation of a medicament for

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RESULT 8
 ID ASB56323 standard; protein; 388 AA.
 XX AC ASB56323;
 XX AC ASB56323;
 DT 18-FEB-2002 (first entry)
 XX Non-endogenous human GPCR protein, SEQ ID NO. 439.
 XX Human; G protein-coupled receptor; GPCR; non-endogenous; mutant;
 XX constitutively activated GPCR; agonist; disease.
 OS Homo sapiens.
 OS Synthetic.
 XX W020017172-A2.
 XX 18-OCT-2001.
 XX 05-APR-2001; 2001MO-US011098.
 XX 07-APR-2000; 2000US-0195747P.
 XX (AREN-) ARENA PHARM INC.
 XX Lehmann-Druisema K, Liaw CW, Lin I;
 XX WPI; 2001-648759/74.
 XX N-PSDB; AB197959.
 DT Identifying agonists of G protein-coupled receptors (GPCRs) for use in
 DT disease treatment, comprises contacting candidate compounds with versions
 DT of GPCRs.
 XX Claim 1, Page 240-242; 394pp; English.
 XX The invention relates to G protein-coupled receptors (GPCRs) for which
 XX the endogenous ligand has been identified. Non-endogenous constitutively
 XX active GPCRs are also disclosed. Methods for identifying agonists and
 XX direct identification of candidate compounds as receptor agonists,
 XX inverse agonists or partial agonists. Such agonists are useful as
 XX therapeutic agents for diseases or disorders associated with GPCRs. The
 XX present sequence is a non-endogenous version of a known human GPCR
 XX Sequence 388 AA;
 Query Match 95.5%; Score 2037; DB 4; Length 388;
 Matches 387; Conservative 0; Mismatches 1;
 Oy 1 MDKLDANVSSESGFVSKEVVLATFSLVLAALGNLWVAVCHQRLKIKNTFV 60
 Db 1 SLAPALLNLSVMPFGALIELVDIMYGVCLVTSGLVLTATISFLHCLISDRY 60
 Oy 61 SLAPALLNLSVMPFGALIELVDIMYGVCLVTSGLVLTATISFLHCLISDRY 120
 Db 61 SLAPALLNLSVMPFGALIELVDIMYGVCLVTSGLVLTATISFLHCLISDRY 120
 Oy 121 AICQPLVYNNMTFLRALMLGGGWPTFISFLPIMQNNNGIIDLERSINGLGQD 180
 Db 121 AICQPLVYNNMTFLRALMLGGGWPTFISFLPIMQNNNGIIDLERSINGLGQD 180
 Oy 181 FHATERRFQNSNSTCYVFWKPKYATCSVYAFIPFLVAYLVYVMEHAGQI 240
 Db 170 ---TEREPQNSNSTCYVFWKPKYATCSVYAFIPFLVAYLVYVMEHAGQI 226
 Oy 241 QMLRGAGASSERQSDQSTHETWRTETAKTLICIIMQPCLCWAPFFVTHVDPFD 300
 Db 241 QMLRGAGASSERQSDQSTHETWRTETAKTLICIIMQPCLCWAPFFVTHVDPFD 286
 Oy 301 YTVQGWTFATFALMGVINGSLNPLFVFNKSFRAFLIILCCDERRYRPSILQGVFC 346
 Db 301 YTVQGWTFATFALMGVINGSLNPLFVFNKSFRAFLIILCCDERRYRPSILQGVFC 346

Db 287 YTVQGWTFATFALMGVINGSLNPLFVFNKSFRAFLIILCCDERRYRPSILQGVFC 346
 Oy 361 STTITNGSTHVLDAVECWMECHQCHPSPATSPVAQSDT 402
 Db 347 STTITNGSTHVLDAVECWMECHQCHPSPATSPVAQSDT 388
 RESULT 9
 ID AAR57032 standard; protein; 388 AA.
 XX AC AAR57032;
 XX AC AAR57032;
 DT 25-MAR-2003 (revised)
 DT 04-MAR-1995 (first entry)
 XX Serotonin receptor encoded by full-length human serotonin 510 clone.
 XX 5-HT4 serotonin receptor; 5-HT4R; 5-HT4A; adenylate cyclase; agonist;
 XX 510 clone.
 XX Homo sapiens.
 XX W09414957-A2.
 XX 07-JUL-1994.
 XX 22-DEC-1993; 93MO-US012586.
 XX 24-DEC-1992; 92US-00956772.
 XX (STNA-) SYNAPTIC PHARM CORP.
 XX Gerald C, Hertig P, Branchek TA, Weinschenk RU;
 XX WPI; 1994-234695/28.
 XX N-PSDB; AAC68831.
 XX Mammalian 5-HT4 serotonin receptor: cDNA, protein, anti-gene
 XX expression, and functional studies: a model for screening for
 XX involving abnormal 5-HT4 receptor expression, for screening for
 XX (ant)agonists, prodn. of transgenic animals etc.
 XX Example; Page 96-98; 161pp; English.
 XX S10 is a 270 bp fragment identified when rat brain cDNA was used as
 XX template in a PCR with the degenerate primers 3.17 (AAC68832) and 5.5
 XX (AAC68833). The clone expressed in COS cells and was selected and sequenced. By
 XX hybridization, two full-length cDNA clones - S10-87, 5.5kb; and S10-95,
 XX 4.5kb - were determined. The full length human S10 clones are given in
 XX AAC68831 and AAR57032. Page 11 describes these sequences as clones S10-95
 XX and S10-87. Page 12 describes them as clone S10-97. (updated on 25-MAR-2003 to
 XX correct RN field).
 XX Sequence 388 AA;
 Query Match 94.4%; Score 2014; DB 2; Length 388;
 Best Local Similarity 95.0%; Pred. No. 3, 3e-211;
 Matches 382; Conservative 3; Mismatches 3; Indels 14; Gaps 1;
 Oy 1 MDKLDANVSSESGFVSKEVVLATFSLVLAALGNLWVAVCHQRLKIKNTFV 60
 Db 1 MDKLDANVSSESGFVSKEVVLATFSLVLAALGNLWVAVCHQRLKIKNTFV 60
 Oy 61 SLAPALLNLSVMPFGALIELVDIMYGVCLVTSGLVLTATISFLHCLISDRY 120
 Db 61 SLAPALLNLSVMPFGALIELVDIMYGVCLVTSGLVLTATISFLHCLISDRY 120
 Oy 121 AICQPLVYNNMTFLRALMLGGGWPTFISFLPIMQNNNGIIDLERSINGLGQD 180
 Db 121 AICQPLVYNNMTFLRALMLGGGWPTFISFLPIMQNNNGIIDLERSINGLGQD 180
 Oy 121 AICQPLVYNNMTFLRALMLGGGWPTFISFLPIMQNNNGIIDLERSINGLGQD 180
 Db 121 AICQPLVYNNMTFLRALMLGGGWPTFISFLPIMQNNNGIIDLERSINGLGQD 180

181 PHAIEKPKQNSNSTCYVWPKNPVATCSVWATPPELLWVLAZYIVYANKBAHQI 240
 170 ---IEKFKPKQNSNSTCYVWPKNPVATCSVWATPPELLWVLAZYIVYANKBAHQI 226
 121 QMQRGASERSEPOGADQHSERHETETKAANTLCIMGECCLCAFFPVNIVDPTD 300
 227 QMQRGASERSEPOGADQHSERHETETKAANTLCIMGECCLCAFFPVNIVDPTD 286
 301 YTVQGVWTFALFNGVINGSLGPRVAFUNSPRAFLILCCDDERFRPSILQGVPC 360
 287 YTVQGVWTFALFNGVINGSLGPRVAFUNSPRAFLILCCDDERFRPSILQGVPC 346
 361 STTTINGSHVLRDVECGQWESQHPATSLVAQPSDT 402
 347 STTTINGSHVLRDVECGQWESQHPATSLVAQPSDT 388

RESULT 10
 AAO19905
 X X AAO19905 standard; protein; 388 AA.
 X X AAO19905;
 X X 11-AUG-2003 (first entry)
 X X Human TM4 receptor associated protein swisnew/070528/SH4_CVNP0.
 X X Human: G-protein coupled receptor; TM4 receptor; receptor; cytosolic;
 X X haemostatic; antithrombotic; cardiac; antidiabetic; anorectic; asthma;
 X X neuroprotective; haemostatic disorder; COPD; cardiovascular disease;
 X X CNS disorders; diabetes; obesity; cancer; genito-urinary disorder.
 X X Homo sapiens.
 X X W020020101943-A2.
 X X 19-DEC-2002.
 X X 06-JUN-2002; 2002WO-EP006204.
 X X 08-JUN-2001; 2001US-0296447P.
 X X 15-NOV-2001; 2001US-0313193P.
 X X 17-APR-2002; 2002US-0372811P.
 X X (PAPS) BAYER AG.
 X X Zhu Z;
 X X WPI; 2003-14806/14.
 X X Novel polynucleotide encoding G-protein coupled receptor, TM4 receptor,
 X X useful for treating hematological disorders, asthma, cardiovascular
 X X disorders, diabetes, obesity, cancer and genito-urinary disorders.
 X X Disclosure; Fig 5; 14pp; English.

The present invention provides the protein and coding sequences of human G-protein coupled receptor. The sequences are useful in the treatment of hematological disorders, asthma, pulmonary disease, asthma, cardiovascular disorders, central nervous system (CNS) disorders, diabetes, obesity, cancer and genito-urinary disorders. The present sequence is the protein swisnew/070528/SH4_CVNP0 Sequence 388 AA;

Query Match 91.6%; Score 1954; Dh 6; Length 388;
 Identity 81%; Positives 302; Gaps 1;
 Matches 370; Conservative 8; Mismatches 10; Indels 14; Gaps 1;

1 MNDLVNVSSEGGVSRVIVLITFTVIMALIGLNLWVAVCWDRQARKINFTIV 60
 1 MNDLVNVSSEGGVSRVIVLITFTVIMALIGLNLWVAVCWDRQARKINFTIV 60

QY 61 SLAFAPDLAVLVMPFPAETELWOTMIVKQVCLWTFELQVLTASLIRKCGISDRYY 120
 DB 111-----IEKFKPKQNSNSTCYVWPKNPVATCSVWATPPELLWVLAZYIVYANKBAHQI 120
 QY 121 QMQRGASERSEPOGADQHSERHETETKAANTLCIMGECCLCAFFPVNIVDPTD 180
 DB 121 QMQRGASERSEPOGADQHSERHETETKAANTLCIMGECCLCAFFPVNIVDPTD 180
 QY 122 ALICQPLVYVNNOTPLRALAGGVNIPMTISFLPIMQWNNIGLVL----- 169
 QY 181 PHAIEKPKQNSNSTCYVWPKNPVATCSVWATPPELLWVLAZYIVYANKBAHQI 240
 DB 170 ---IEKFKPKQNSNSTCYVWPKNPVATCSVWATPPELLWVLAZYIVYANKBAHQI 226
 QY 241 QMQRGASERSEPOGADQHSERHETETKAANTLCIMGECCLCAFFPVNIVDPTD 300
 DB 241 QMQRGASERSEPOGADQHSERHETETKAANTLCIMGECCLCAFFPVNIVDPTD 300
 QY 287 YTVQGVWTFALFNGVINGSLGPRVAFUNSPRAFLILCCDDERFRPSILQGVPC 360
 DB 287 YTVQGVWTFALFNGVINGSLGPRVAFUNSPRAFLILCCDDERFRPSILQGVPC 346
 QY 361 STTTINGSHVLRDVECGQWESQHPATSLVAQPSDT 402
 DB 347 STTTINGSHVLRDVECGQWESQHPATSLVAQPSDT 388

RESULT 11
 AAO57030
 X X AAO57030 standard; protein; 406 AA.
 X X AAO57030;
 X X 25-MAR-2003 (revised)
 X X 04-MAR-1995 (first entry)
 X X Rat 5-HT4 receptor encoded by S10-95 cDNA clone.
 X X 5-HT4 serotonin receptor; 5-HT4R; 5-HT4a; adenylyate cyclase; agonist.
 X X Rattus rattus.
 X X X09414957-A2.
 X X 07-JUL-1994.
 X X 22-DEC-1993; 93WO-US012586.
 X X 24-DEC-1992; 92US-00996772.
 X X (SYNA-) SYNAPTIC PHARM CORP.
 X X Gerald C. Hartig P. Branchek TA, Weinshank RJ.
 X X N-PDB; AAO57030.
 X X WPI; 1994-234695/28.
 X X Mammalian 5-HT4 serotonin receptor, corresp. DNA, probes, anti-sense
 X X oligonucleotide(s) and antibodies - useful for treating conditions
 X X involving abnormal 5-HT4 receptor expression, for screening for
 X X (anti)agonists, prodn. of transgenic animals etc.
 X X Disclosure; Page 88-93; 161pp; English.

An isolated DNA molecule encoding a mammalian 5-HT4 receptor is claimed. The DNA molecule encodes a protein having a molecular weight of approximately 40 kDa. The DNA molecule is a 270 bp fragment identified when rat brain cDNA was used as template in a PCR with the degenerate primers 3.17 (AAQ6882) and 5.5 (AAQ6883) and the 3rd and 5th putative transmembrane domains. The peptide sequence correspond to the 810 PCR clone contd. a transmembrane IV-like domain and the clone represents a potentially new serotonin receptor. By direct PCR analysis of bacterial pools, rib selection and filter hybridisation, two

CC full-length cDNA clones (810-87, 5.5kb; and 810-95, 4.5kb) were
CC determined. The peptide sequences are only 96.7% identical diverging in
CC the 3' untranslated regions are totally divergent. (Updated on 25-MAR-
CC 2003 to correct RN field.)

CC Sequence 406 AA;
CC Query Match 88.1%; Score 1879; DB 2; Length 406;
CC Best local Similarity 89.0%; Pred. No. 2.1e-196;
CC Matches 355; Conservative 13; Mismatches 17; Indels 14; Gaps 1;
CC
CC 1 MOKLDANVSEEGSEGVKVVLTSTVILMALGNLWVAVCWROQLAKIKTNFIV 60
CC 1 MOKLDANVSEEGSEGVKVVLTSTVILMALGNLWVAVCWROQLAKIKTNFIV 60
CC 61 SLAPADLVSVLWMPFATLAVODIIVGVFVCLVTSLDVLTASTFHLACISLDRTY 120
CC 61 SLAPADLVSVLWMPFATLAVODIIVGVFVCLVTSLDVLTASTFHLACISLDRTY 120
CC 121 ACCOPLVYKNNKTPFLALMGAGCCVPTFISLPLVMOGNNIGTIDERSIMOGLOQD 180
CC 121 ACCOPLVYKNNKTPFLALMGAGCCVPTFISLPLVMOGNNIGTIDERSIMOGLOQD 180
CC 181 FHAEKGFNNNSSTCYVWNNKPYATCSVAFTIPFLAYLAIYVYVAKESHAQI 240
CC 170 ---LEKRGFNNSSTCYVWNNKPYATCSVAFTIPFLAYLAIYVYVAKESHAQI 226
CC 241 QMLQKAGASSESPQSGAHSHTHMTETAAKTLCINGFCLOMAPFFVTVVDPFID 300
CC 227 QMLQKAGASSESPQSGAHSHTHMTETAAKTLCINGFCLOMAPFFVTVVDPFID 286
CC 301 YTVFGQWTFALMGTINSLNPLFLYAFKNSFRAFLIICCDERYRPSILGQVPC 360
CC 361 SITTINGSTHVLAR 373
CC 287 YTVFGQWTFALMGTINSLNPLFLYAFKNSFRAFLIICCDERYRPSILGQVPC 346
CC 347 SITTINGSTHVLAR 359

RESULT 12
ID AAY14522 standard; protein; 360 AA.
AC AAY14522;
DX
XX 31-AUG-1999 (first entry)
XX Human serotonin receptor splice variant 5-HT-4(d).
XX Human, serotonin receptor; splice variant; alternative splicing; 5-HT4;
XX screening; ligand; central nervous system; CNS; disorder; expression;
XX gastrointestinal disorder.
XX Homo sapiens.
XX FR271741-A1.
XX 04-JUN-1999.
XX 28-NOV-1997; 97FR-00015037.
XX 28-NOV-1997; 97FR-00015037.
XX (INRM) INSEEM INST NAT SANTE & RECH MEDICALE.
XX Flachemeter R, Longlais M, Dahmou Y, Gastineau M, Blondel O;
XX Hoebeke J;
XX NP1; 1999-349539/30.
XX NP5; 1999-349539/30.
XX NP5; 1999-349539/30.

PT Splice variant of human 5-HT4 receptor - and corresponding DNA, vectors,
XX antibodies, etc.
XX Claim 1; Page 44-45; 58pp; French.
XX This sequence represents the amino acid sequence for the human serotonin
XX receptor. The sequence is identical to the sequence of the human serotonin
XX receptor polypeptides can be used to screen for substances, especially
XX ligands, useful in the treatment of CNS disorders associated with
XX abnormal 5-HT4(c) receptor expression or gastrointestinal disorders
XX associated with abnormal 5-HT4(d) receptor expression

CC Sequence 360 AA;
CC Query Match 88.0%; Score 1879; DB 2; Length 360;
CC Best local Similarity 96.3%; Pred. No. 2.3e-156;
CC Matches 359; Conservative 0; Mismatches 0; Indels 14; Gaps 1;
CC
CC 1 MOKLDANVSEEGSEGVKVVLTSTVILMALGNLWVAVCWROQLAKIKTNFIV 60
CC 1 MOKLDANVSEEGSEGVKVVLTSTVILMALGNLWVAVCWROQLAKIKTNFIV 60
CC 61 SLAPADLVSVLWMPFATLAVODIIVGVFVCLVTSLDVLTASTFHLACISLDRTY 120
CC 61 SLAPADLVSVLWMPFATLAVODIIVGVFVCLVTSLDVLTASTFHLACISLDRTY 120
CC 121 ACCOPLVYKNNKTPFLALMGAGCCVPTFISLPLVMOGNNIGTIDERSIMOGLOQD 180
CC 121 ACCOPLVYKNNKTPFLALMGAGCCVPTFISLPLVMOGNNIGTIDERSIMOGLOQD 180
CC 181 FHAEKGFNNNSSTCYVWNNKPYATCSVAFTIPFLAYLAIYVYVAKESHAQI 240
CC 170 ---LEKRGFNNSSTCYVWNNKPYATCSVAFTIPFLAYLAIYVYVAKESHAQI 226
CC 241 QMLQKAGASSESPQSGAHSHTHMTETAAKTLCINGFCLOMAPFFVTVVDPFID 300
CC 227 QMLQKAGASSESPQSGAHSHTHMTETAAKTLCINGFCLOMAPFFVTVVDPFID 286
CC 301 YTVFGQWTFALMGTINSLNPLFLYAFKNSFRAFLIICCDERYRPSILGQVPC 360
CC 287 YTVFGQWTFALMGTINSLNPLFLYAFKNSFRAFLIICCDERYRPSILGQVPC 346
CC 361 SITTINGSTHVLAR 373
CC 347 SITTINGSTHVLAR 359

RESULT 13
ID AAY14521
AC AAY14521 standard; protein; 360 AA.
DX
XX 31-AUG-1999 (first entry)
XX Human serotonin receptor splice variant 5-HT-4(c).
XX Human, serotonin receptor; splice variant; alternative splicing; 5-HT4;
XX screening; ligand; central nervous system; CNS; disorder; expression;
XX gastrointestinal disorder.
XX Homo sapiens.
XX FR271741-A1.
XX 04-JUN-1999.
XX 28-NOV-1997; 97FR-00015037.
XX 28-NOV-1997; 97FR-00015037.
XX (INRM) INSEEM INST NAT SANTE & RECH MEDICALE.
XX Flachemeter R, Longlais M, Dahmou Y, Gastineau M, Blondel O;
XX Hoebeke J;
XX NP1; 1999-349539/30.
XX NP5; 1999-349539/30.

Fischmeister R, Langlois M, Dalmoune Y, Gastineau M, Blondel O,
Hoebke J,
WT: 1999-149536/10.
N-PSDB: AAX79306.
Splice variants of human 5-HT₄ receptor - and corresponding DNA, vectors,
antibodies, etc.
Claim 1; Page 41-42; 58pp; French.
This sequence represents the amino acid sequence for the human serotonin
receptor 5-HT₄ (Cys192-5-His210) (d). (AAX74522)
ligands, useful in the treatment of CNS disorders associated with
abnormal 5-HT₄ (d) receptor expression or gastrointestinal disorders
associated with abnormal 5-HT₄ (d) receptor expression
Sequence 380 AA;
Query Match 88.04; Score 3877; DB 2; Length 380;
Best Local Similarity 95.51; Pred. No. 6.9e-196; Indels 14; Gaps 1;
Matches 359; Conservative 0; Mismatches 4;
1 MKLDANVSSRGSGVEKVLLTFLSTVLAIGLNLGWLWVWVNDQRLKNTVFV 60
b 1 MKLDANVSSRGSGVEKVLLTFLSTVLAIGLNLGWLWVWVNDQRLKNTVFV 60
y 61 SLAFADLVSVLPFGALVWDVWYGVFCLVATSLDVLTTASIFLCCISLRY 120
b 61 SLAFADLVSVLPFGALVWDVWYGVFCLVATSLDVLTTASIFLCCISLRY 120
y 121 ALCQPLVYNNMPTFLRALMGSCWVPTTIFSLPQMGNNIGIDLSRLNGLQGD 180
b 121 ALCQPLVYNNMPTFLRALMGSCWVPTTIFSLPQMGNNIGIDLSRLNGLQGD 180
y 181 PHAIEKFKQNSNSTICVPWKNFVATCSVWVYVPIFLMLVLTATVYVTAKEHAI 240
b 170 ---LEKFKQNSNSTICVPWKNFVATCSVWVYVPIFLMLVLTATVYVTAKEHAI 226
y 241 QMORAGASSRSGPSQADHSHRMTETKAATLCIMGCTCLQAPPPVNIYDPTD 300
b 241 QMORAGASSRSGPSQADHSHRMTETKAATLCIMGCTCLQAPPPVNIYDPTD 300
y 301 YTPQGVQVAFVLMYVINGSLNPLFLAFVANSFRAPFLLCCDDERYRPSILQATVPC 360
b 287 YTPQGVQVAFVLMYVINGSLNPLFLAFVANSFRAPFLLCCDDERYRPSILQATVPC 346
y 361 SITTINGSTVLRDVAE 377
b 347 SITTINGSTVLRDVAE 363

RESULT 14
D ABB56322 standard; protein; 387 AA.
X ABB56322;
T 18-FEB-2002 (first entry)
X Non-endogenous human GPCR protein, SEQ ID NO: 437.
X Human; G protein-coupled receptor; GPCR; non-endogenous; mutant;
W constitutively activated GPCR; agonist; disease.
S Homo sapiens.
S Synthetic.
X WO20017172-A2.
X 18-OCT-2001.

05-APR-2001, 2001WO-US011098.
07-APR-2000, 2000US-019574P.
(ARSEN-) ARSEN PHARM INC.
Lehmann-Bruinma K, Llaw CM, Lin J;
WT: 2001-648756/74.
N-PSDB: AAI57936.
Identifying agonists of G protein-coupled receptors (GPCRs) for use in
disease treatment, comprises contacting candidate compounds with versions
of GPCR.
Claim 1; Page 240; 394pp; English.
The invention relates to G protein-coupled receptors (GPCRs) for which
activated versions of known GPCRs are used in the invention for the
direct identification of candidate compounds as receptor agonists,
inverse agonists or partial agonists. Such agonists are useful as
therapeutic agents for the treatment of diseases associated with GPCRs.
The present sequence is a non-endogenous version of a known human GPCR
Sequence 387 AA;
Query Match 87.94; Score 1874; DB 4; Length 387;
Best Local Similarity 95.51; Pred. No. 6.9e-196; Indels 14; Gaps 1;
Matches 359; Conservative 3; Mismatches 3;
1 MKLDANVSSRGSGVEKVLLTFLSTVLAIGLNLGWLWVWVNDQRLKNTVFV 60
Qy 1 MKLDANVSSRGSGVEKVLLTFLSTVLAIGLNLGWLWVWVNDQRLKNTVFV 60
Db 1 MKLDANVSSRGSGVEKVLLTFLSTVLAIGLNLGWLWVWVNDQRLKNTVFV 60
Qy 61 SLAFADLVSVLPFGALVWDVWYGVFCLVATSLDVLTTASIFLCCISLRY 120
Db 61 SLAFADLVSVLPFGALVWDVWYGVFCLVATSLDVLTTASIFLCCISLRY 120
Qy 121 ALCQPLVYNNMPTFLRALMGSCWVPTTIFSLPQMGNNIGIDLSRLNGLQGD 180
Db 121 ALCQPLVYNNMPTFLRALMGSCWVPTTIFSLPQMGNNIGIDLSRLNGLQGD 180
Qy 181 PHAIEKFKQNSNSTICVPWKNFVATCSVWVYVPIFLMLVLTATVYVTAKEHAI 240
Db 170 ---LEKFKQNSNSTICVPWKNFVATCSVWVYVPIFLMLVLTATVYVTAKEHAI 226
Qy 241 QMORAGASSRSGPSQADHSHRMTETKAATLCIMGCTCLQAPPPVNIYDPTD 300
Db 227 QMORAGASSRSGPSQADHSHRMTETKAATLCIMGCTCLQAPPPVNIYDPTD 286
Qy 301 YTPQGVQVAFVLMYVINGSLNPLFLAFVANSFRAPFLLCCDDERYRPSILQATVPC 360
Db 287 YTPQGVQVAFVLMYVINGSLNPLFLAFVANSFRAPFLLCCDDERYRPSILQATVPC 346
Qy 361 SITTINGSTVLRDVAE 376
Db 347 SITTINGSTVLRDVAE 362

RESULT 15
D ABB56325 standard; protein; 360 AA.
X ABB56325;
T 18-FEB-2002 (first entry)
X Non-endogenous human GPCR protein, SEQ ID NO: 443.
X Human; G protein-coupled receptor; GPCR; non-endogenous; mutant;
W constitutively activated GPCR; agonist; disease.
S Homo sapiens.
S Synthetic.

OS Homo sapiens.
 OS Synthetic.
 XX WO200177172-A2.
 XX
 PD 18-OCT-2001.
 XX
 XX 05-APR-2001; 2001NO-US011098.
 XX
 PR 07-APR-2000; 2000US-0195747P.
 XX
 XX (AREN-) ARENA PHARM INC.
 PA
 PI Lehmann-Bruijsma X, Liaw CW, Lin I;
 XX
 XX WPI: 2001-648759/74.
 DR N-PS08; AB197961.
 XX
 PR Identifying agonists of G protein-coupled receptors (GPCRs) for use in
 PR disease treatment, comprises contacting candidate compounds with versions
 PR of GPCRs.
 XX
 PS Claim 1; Page 244-245; 394pp; English.
 XX
 XX The invention relates to G protein-coupled receptors (GPCRs) for which
 CC the endogenous agonists are unknown. The invention relates to a method
 CC for identifying candidate compounds for use in the invention for the
 CC direct identification of candidate compounds as receptor agonists,
 CC inverse agonists or partial agonists. Such agonists are useful as
 CC therapeutic agents for diseases or disorders associated with GPCRs. The
 CC present sequence is a non-endogenous version of a known human GPCR.
 XX
 SQ Sequence 360 AA:
 Query Match 87.8%; Score 1879; DS 4; Length 360;
 Pos. Local Similarity 86.0%; Pos. No. 8e-196;
 Matches 358; Conservative 0; Mismatches 1; Indels 14; Gaps 1;
 Oy 1 MOKLDANYSSEERFSQVENVLLTSTSTVILMALGNLWAVWQNDQJAKIKTNPIIV 60
 Db 1 MOKLDANYSSEERFSQVENVLLTSTVILMALGNLWAVWQNDQJAKIKTNPIIV 60
 Oy 61 SLVAPOLLVFLVLPFGATLQVQDWTGVYFCLVTELVLLVLTASIFLCCISLDRTY 120
 Db 61 SLVAPOLLVFLVLPFGATLQVQDWTGVYFCLVTELVLLVLTASIFLCCISLDRTY 120
 Oy 121 ALCQPLVYNNMTPLRIALMLGGQWPTPIFSLPIMQNNNGIIDLERSLQGLQD 180
 Db 121 ALCQPLVYNNMTPLRIALMLGGQWPTPIFSLPIMQNNNGIIDLERSLQGLQD 180
 Oy 181 FPAIEERFQNSNSTCYFVWVKPAITCSVVAFTPIFLMLVATYVYTAKEBAHQI 240
 Db 170 ---TERAFQNSNSTCYFVWVKPAITCSVVAFTPIFLMLVATYVYTAKEBAHQI 226
 Oy 241 QMLQKAGASSERFSQADQSTERNKTEAAKTLGIMCFCFLCWAPFVTVIVDPID 300
 Db 227 QMLQKAGASSERFSQADQSTERNKTEAAKTLGIMCFCFLCWAPFVTVIVDPID 286
 Oy 301 YTVFGQWTAFLMGVINGSLNPFVAFNGSEFAFLILCCDERYRPSLQQTVC 360
 Db 287 YTVFGQWTAFLMGVINGSLNPFVAFNGSEFAFLILCCDERYRPSLQQTVC 346
 Oy 361 STTTINGSTHVLK 373
 Db 347 STTTINGSTHVLK 359

Search completed: August 5, 2004, 13:34:26
 Job time : 56 secs

1	2042	95.7	388	1	US-08-445-023-8	Sequence 8, April
2	2042	95.7	388	4	US-08-326-311-8	Sequence 8, April
3	2042	95.7	388	5	PCR-US93-12586-8	Sequence 8, April
4	2042	95.7	388	6	PCR-US93-12586-8	Sequence 8, April
5	1884	88.3	406	1	US-07-956-774-A	Sequence 4, April
6	1884	88.3	406	1	US-07-956-774-A	Sequence 4, April
7	1884	88.3	406	1	US-08-445-023-4	Sequence 4, April
8	1878	88.0	406	4	PCR-US93-12586-8	Sequence 4, April
9	1878	88.0	406	5	PCR-US93-12586-8	Sequence 4, April
10	1877	88.0	406	4	US-09-555-113-B-24	Sequence 24, April
11	1877	88.0	380	4	US-09-555-113-B-24	Sequence 24, April
12	1877	88.0	380	4	US-09-555-113-B-24	Sequence 24, April
13	1769	82.9	387	1	US-08-445-023-2	Sequence 2, April
14	1769	82.9	387	4	US-08-326-311-2	Sequence 2, April
15	1769	82.9	387	5	PCR-US93-12586-2	Sequence 2, April
16	1239	58.1	261	4	PCR-US93-12586-2	Sequence 2, April
17	1239	58.1	261	4	US-08-326-311-15	Sequence 15, April
18	1239	58.1	261	5	PCR-US93-12586-15	Sequence 15, April
19	939	40.0	178	1	PCR-US93-12586-6	Sequence 6, April
20	939	40.0	178	1	PCR-US93-12586-6	Sequence 6, April
21	939	40.0	178	4	US-08-326-311-6	Sequence 6, April
22	939	40.0	178	5	PCR-US93-12586-6	Sequence 6, April
23	582.5	27.3	446	1	US-07-956-377-B-1	Sequence 1, April
24	580.5	27.2	446	2	US-07-956-377-B-1	Sequence 1, April
25	580.5	27.2	446	4	US-09-166-510-4	Sequence 4, April
26	580.5	27.2	446	5	US-09-166-510-4	Sequence 4, April
27	580.5	27.2	446	5	US-09-166-510-4	Sequence 4, April
28	566	26.5	418	3	US-08-445-023-8	Sequence 8, April
29	566	26.5	418	3	US-08-445-023-8	Sequence 8, April
30	566	26.5	418	3	US-08-445-023-8	Sequence 8, April

Best Match	95.7%	Score 2042	DB 1	Length 388
Query Local Similarity	95.5%	Pred. No. 175-156		
Matches 38	Conservative 0	Mismatches 0	Indels 14	Gaps 1
Oy	1	MCZDANLWBEESGFGSVKVVLTFTSTFVLTALQNLWAWVQCDRIKNTFFV	60	
DD	1	MCZDANLWBEESGFGSVKVVLTFTSTFVLTALQNLWAWVQCDRIKNTFFV	60	
Oy	61	SLAPALLVWVPPQALRQDQIVGVPCFVTSVLLTASTFPLUCISURY	120	
DD	1	SLAPALLVWVPPQALRQDQIVGVPCFVTSVLLTASTFPLUCISURY	120	

Qy 121 ALCQGVYVNMKQVAFALVWVGQVAFVLTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Db 121 ALCQGVYVNMKQVAFALVWVGQVAFVLTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Qy 181 FHAEIKERKFNQNSSTCYVFMWKQVATCSVVAFTIPFLVLAAYRIYVYAKEHAHQI 240
 Db 170 ---LEKRFQFNQNSSTCYVFMWKQVATCSVVAFTIPFLVLAAYRIYVYAKEHAHQI 226
 Qy 241 QMLQAGASSESPASADOSHTRMTETAAKTLICIMGFCFLCWAPFFVTVIVDPFD 300
 Db 241 QMLQAGASSESPASADOSHTRMTETAAKTLICIMGFCFLCWAPFFVTVIVDPFD 300
 Qy 301 YTVPGQWTFALMGTNGSLNPLVATLWNSFRFAEFLILCCDQRYRSPSLQQTVP 360
 Db 287 YTVPGQWTFALMGTNGSLNPLVATLWNSFRFAEFLILCCDQRYRSPSLQQTVP 346
 Qy 361 STTITNGSTVLEDAVECGQWESQCHPPATSPVAAQSDT 402
 Db 347 STTITNGSTVLEDAVECGQWESQCHPPATSPVAAQSDT 388

RESULT 2
 US-09-328-314-8
 TITLE REFERENCE: 42667-A-PC/JPW/TEP
 PATENT NO. 631401
 GENERAL INFORMATION:
 APPLICANT: Gerald, Christophe
 INVENTOR: Gerald, Christophe
 APPLICANT: Reichel, Theresa
 INVENTOR: Reichel, Theresa
 APPLICANT: Weinheik, Richard L.
 INVENTOR: Weinheik, Richard L.
 TITLE OF INVENTION: DNA Encoding 5-HT_{1A} Serotonin Receptors And Uses Thereof
 FILE REFERENCE: 42667-A-PC/JPW/TEP
 CURRENT FILING DATE: 1998-04-03
 EARLIER APPLICATION NUMBER: 08/446,822
 EARLIER FILING DATE: 1995-07-31 / US93/12586
 EARLIER FILING DATE: 1993-12-22
 EARLIER APPLICATION NUMBER: 07/996,772
 EARLIER FILING DATE: 1992-12-24
 NUMBER OF SEQ ID NOS: 19
 SEQ ID NO 8
 TYPE: PRT
 LENGTH: 388
 TOPOLOGY: linear
 MOLECULAR TYPE: protein
 US-09-328-314-8

Query Match 95.7%; Score 2042; DB 4; Length 388;
 Best Local Similarity 96.5%; Pred. No. 5.7e-156;
 Matches 388; Conservative 0; Mismatches 0; Indels 14; Gaps 1;
 Qy 1 MOKLDANVSEEGSEGVKVVLTFTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Db 1 MOKLDANVSEEGSEGVKVVLTFTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Qy 61 SLAFADLLVSLVWMPFGAELVQDVIWYGEVFCVLTSDVLTATSIPLHCCISLDRTY 120
 Db 61 SLAFADLLVSLVWMPFGAELVQDVIWYGEVFCVLTSDVLTATSIPLHCCISLDRTY 120
 Qy 121 ALCQGVYVNMKQVAFALVWVGQVAFVLTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Db 121 ALCQGVYVNMKQVAFALVWVGQVAFVLTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Qy 181 FHAEIKERKFNQNSSTCYVFMWKQVATCSVVAFTIPFLVLAAYRIYVYAKEHAHQI 240
 Db 170 ---LEKRFQFNQNSSTCYVFMWKQVATCSVVAFTIPFLVLAAYRIYVYAKEHAHQI 226
 Qy 241 QMLQAGASSESPASADOSHTRMTETAAKTLICIMGFCFLCWAPFFVTVIVDPFD 300
 Db 227 QMLQAGASSESPASADOSHTRMTETAAKTLICIMGFCFLCWAPFFVTVIVDPFD 286

Qy 301 YTVPGQWTFALMGTNGSLNPLVATLWNSFRFAEFLILCCDQRYRSPSLQQTVP 360
 Db 287 YTVPGQWTFALMGTNGSLNPLVATLWNSFRFAEFLILCCDQRYRSPSLQQTVP 346
 Qy 361 STTITNGSTVLEDAVECGQWESQCHPPATSPVAAQSDT 402
 Db 347 STTITNGSTVLEDAVECGQWESQCHPPATSPVAAQSDT 388

RESULT 3
 US-09-328-314-8
 TITLE REFERENCE: 42667-A-PC/JPW/TEP
 PATENT NO. 631401
 GENERAL INFORMATION:
 APPLICANT: Sympatic Pharmaceutical Corporation
 INVENTOR: Sympatic Pharmaceutical Corporation
 APPLICANT: Sympatic Pharmaceutical Corporation
 INVENTOR: Sympatic Pharmaceutical Corporation
 NUMBER OF SEQUENCES: 15
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: COOPER & DUNHAM
 ATTORNEY: COOPER & DUNHAM
 CITY: NEW YORK
 STATE: NEW YORK
 ZIP: 10112
 COMPUTER FILE NO.: 10112
 INDIAN TYPE: floppy disk
 OPERATING SYSTEM: IBM PC compatible
 SOFTWARE: Patent In Release #1.24
 APPLICATION NUMBER: PCT/US93/12586
 FILING DATE:
 CLASSIFICATION:
 ATOMIZ/ACET/INVENTION:
 NAME: White, P. John
 REGISTRATION NUMBER: 28,678
 REFERENCE/DOCKET NUMBER: 42667-A-PC/JPW/TEP
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (212) 664-0525
 TELEFAX: (212) 664-0525
 TELEX: 422523 COOP UT
 INFORMATION FOR SEQ ID NO: 8:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 388 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULAR TYPE: protein
 PCT-US93-12586-8

Query Match 95.7%; Score 2042; DB 5; Length 388;
 Best Local Similarity 96.5%; Pred. No. 5.7e-156;
 Matches 388; Conservative 0; Mismatches 0; Indels 14; Gaps 1;
 Qy 1 MOKLDANVSEEGSEGVKVVLTFTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Db 1 MOKLDANVSEEGSEGVKVVLTFTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Qy 61 SLAFADLLVSLVWMPFGAELVQDVIWYGEVFCVLTSDVLTATSIPLHCCISLDRTY 120
 Db 61 SLAFADLLVSLVWMPFGAELVQDVIWYGEVFCVLTSDVLTATSIPLHCCISLDRTY 120
 Qy 121 ALCQGVYVNMKQVAFALVWVGQVAFVLTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Db 121 ALCQGVYVNMKQVAFALVWVGQVAFVLTSTVLAALGNLWVAVCWDRQLKNTIV 60
 Qy 181 FHAEIKERKFNQNSSTCYVFMWKQVATCSVVAFTIPFLVLAAYRIYVYAKEHAHQI 240
 Db 170 ---LEKRFQFNQNSSTCYVFMWKQVATCSVVAFTIPFLVLAAYRIYVYAKEHAHQI 226
 Qy 241 QMLQAGASSESPASADOSHTRMTETAAKTLICIMGFCFLCWAPFFVTVIVDPFD 300
 Db 227 QMLQAGASSESPASADOSHTRMTETAAKTLICIMGFCFLCWAPFFVTVIVDPFD 286
 Qy 301 YTVPGQWTFALMGTNGSLNPLVATLWNSFRFAEFLILCCDQRYRSPSLQQTVP 360

b 287 YTVPGQWTFVAFUWJNGVNSGLNFFVAFVANSFRAFLITLCCDDBRYRSLIGQVPC 346
 y 361 STTTINGSTWLRDAVCCGQMSCHPSPATSPVAAQPD 408
 b 347 STTTINGSTWLRDAVCCGQMSCHPSPATSPVAAQPD 388

RESULT 4
 S-09-328-314-4
 Sequence 4, Application US/09328314
 GENE: US09328314.0
 GENE: US09328314.0
 APPLICANT: Gerald, Christophe
 APPLICANT: Hartig, Paul R.
 APPLICANT: Branchet, Theresa A.
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 NUMBER OF SEQUENCES: 12
 CURRENT APPLICATION NUMBER: US/09/328.314
 EARLIER FILING DATE: 1993-12-22 996, 772
 EARLIER FILING DATE: 1993-12-22 996, 772
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent In Ver. 2.1
 SEQ ID NO: 406
 TYPE: PRT
 ORGANISM: Rattus norvegicus

S-09-328-314-4
 Query Watch 88.4%; Score 1884; DB 4; Length 406;
 Best Local Similarity 89.2%; Pred. No. 1.8e-143;
 Matches 357; Conservative 12; Mismatches 16; Indels 14; Gaps 1;

y 1 MKLDANVSSREGSGSEVYVLLTSTVILMAILGNLWVAVCDRLKIKNTYIV 60
 b 1 MKLDANVSSREGSGSEVYVLLTSTVILMAILGNLWVAVCDRLKIKNTYIV 60
 y 61 SLAPADLVVLMVPPGLAEVDVWTVGVEVCLVTSIDVLLTASIFHLCCISLDY 120
 b 61 SLAPADLVVLMVPPGLAEVDVWTVGVEVCLVTSIDVLLTASIFHLCCISLDY 120
 y 121 AICCPVLYNNMPTFLRALAGGVWTFPSLPVWNNNIGIDLERSLNGGLGD 180
 b 121 AICCPVLYNNMPTFLRALAGGVWTFPSLPVWNNNIGIDLERSLNGGLGD 180
 y 181 FHAIKREKFNQNSSTFCVFNWKEVATISVWAFYIFLLMLATRYIVTAGEBAQI 240
 b 170 ---1EKKRENNNSSTFCVFNWKEVATISVWAFYIFLLMLATRYIVTAGEBAQI 226
 y 241 QMLORAGASSESPGSDAOSTHERETETAATKLCIIMGCECLWAPFFVTVVDFPD 300
 b 241 QMLORAGASSESPGSDAOSTHERETETAATKLCIIMGCECLWAPFFVTVVDFPD 300
 y 301 YTVPGQWTFVAFUWJNGVNSGLNFFVAFVANSFRAFLITLCCDDBRYRSLIGQVPC 360
 b 287 YTVPEKWTAFUWJNGVNSGLNFFVAFVANSFRAFLITLCCDDBRYRSLIGQVPC 346
 y 361 STTTINGSTWLRDAVCCGQMSCHPSPATSPVAAQPD 399
 b 347 STTTINGSTWLRDAVCCGQMSCHPSPATSPVAAQPD 385

RESULT 5
 S-07-996-772A-4
 Sequence 4, Application US/07996772A
 GENE: US07996772.0
 GENE: US07996772.0
 APPLICANT: Gerald, Christophe
 APPLICANT: Hartig, Paul R.
 APPLICANT: Branchet, Theresa A.
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 NUMBER OF SEQUENCES: 12
 CURRENT APPLICATION NUMBER: US/07/996.772A
 EARLIER FILING DATE: 1993-12-22 996, 772
 EARLIER FILING DATE: 1993-12-22 996, 772
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent In Ver. 2.1
 SEQ ID NO: 406
 TYPE: PRT
 ORGANISM: Rattus norvegicus

APPLICANT: Gerald, Christophe
 APPLICANT: Hartig, Paul R.
 APPLICANT: Branchet, Theresa A.
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 NUMBER OF SEQUENCES: 12
 CURRENT APPLICATION NUMBER: US/07/996.772A
 EARLIER FILING DATE: 1993-12-22 996, 772
 EARLIER FILING DATE: 1993-12-22 996, 772
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent In Ver. 2.1
 SEQ ID NO: 406
 TYPE: PRT
 ORGANISM: Rattus norvegicus

S-07-996-772A-4
 Query Watch 88.3%; Score 1884; DB 1; Length 406;
 Best Local Similarity 89.2%; Pred. No. 2.7e-143;
 Matches 356; Conservative 13; Mismatches 16; Indels 14; Gaps 1;

y 1 MKLDANVSSREGSGSEVYVLLTSTVILMAILGNLWVAVCDRLKIKNTYIV 60
 b 1 MKLDANVSSREGSGSEVYVLLTSTVILMAILGNLWVAVCDRLKIKNTYIV 60
 y 61 SLAPADLVVLMVPPGLAEVDVWTVGVEVCLVTSIDVLLTASIFHLCCISLDY 120
 b 61 SLAPADLVVLMVPPGLAEVDVWTVGVEVCLVTSIDVLLTASIFHLCCISLDY 120
 y 121 AICCPVLYNNMPTFLRALAGGVWTFPSLPVWNNNIGIDLERSLNGGLGD 180
 b 121 AICCPVLYNNMPTFLRALAGGVWTFPSLPVWNNNIGIDLERSLNGGLGD 180
 y 181 FHAIKREKFNQNSSTFCVFNWKEVATISVWAFYIFLLMLATRYIVTAGEBAQI 240
 b 170 ---1EKKRENNNSSTFCVFNWKEVATISVWAFYIFLLMLATRYIVTAGEBAQI 226
 y 241 QMLORAGASSESPGSDAOSTHERETETAATKLCIIMGCECLWAPFFVTVVDFPD 300
 b 241 QMLORAGASSESPGSDAOSTHERETETAATKLCIIMGCECLWAPFFVTVVDFPD 300
 y 301 YTVPGQWTFVAFUWJNGVNSGLNFFVAFVANSFRAFLITLCCDDBRYRSLIGQVPC 360
 b 287 YTVPEKWTAFUWJNGVNSGLNFFVAFVANSFRAFLITLCCDDBRYRSLIGQVPC 346
 y 361 STTTINGSTWLRDAVCCGQMSCHPSPATSPVAAQPD 399
 b 347 STTTINGSTWLRDAVCCGQMSCHPSPATSPVAAQPD 385

RESULT 6
 S-08-446-822-4
 Sequence 4, Application US/08446822.4
 GENE: US08446822.0
 GENE: US08446822.0
 APPLICANT: Gerald, Christophe
 APPLICANT: Hartig, Paul R.
 APPLICANT: Branchet, Theresa A.
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS AND USES THEREOF
 NUMBER OF SEQUENCES: 12
 CURRENT APPLICATION NUMBER: US/08/446.822
 EARLIER FILING DATE: 1993-12-22 996, 772
 EARLIER FILING DATE: 1993-12-22 996, 772
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent In Ver. 2.1
 SEQ ID NO: 406
 TYPE: PRT
 ORGANISM: Rattus norvegicus

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1 Sequence 4, Application US/08446122
2 Patent No. 5766979
3 GENERAL INFORMATION:
4 APPLICANT: SYNAPTIC PHARMACEUTICAL CORPORATION
5 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS
6 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS
7 CORRESPONDENCE ADDRESS:
8 ADDRESS: COOPER & DUNHAM
9 STREET: 30 ROCKEFELLER PLAZA
10 CITY: NEW YORK
11 STATE: NEW YORK
12 ZIP: 10112
13 COMPUTER READABLE FORM:
14 MEDIUM TYPE: Floppy disk
15 OPERATING SYSTEM: IBM PC compatible
16 SOFTWARE: PC-DOS/MS-DOS
17 CURRENT APPLICATION DATA: Patent Release #1.30
18 FILING DATE: June 1, 1995
19 CLASSIFICATION: 800
20 ATORNEY/AGENT INFORMATION:
21 NAME: Waite, P. John
22 REGISTRATION NUMBER: 28,678
23 REFERENCE/DOCKET NUMBER: 42667-A-PCT-US/JPM/MAT
24 TELEPHONE: (212) 278-0400
25 TELEFAX: (212) 391-0525
26 INFORMATION FOR SEQ ID NO: 4:
27 SEQUENCE CHARACTERISTICS:
28 LENGTH: 406 amino acids
29 TYPE: amino acid
30 TOPOLOGY: linear
31 MOLECULE TYPE: protein
32 US-08-446-822-4

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Query Match 88.3%; Score 1884; DB 1; Length 406;
Best Local Similarity 89.2%; Pred. No. 2.7e-143;
Matches 356; Conservative 13; Mismatches 16; Indels 14; Gaps 1;

Qy 1 MOKLDANNSSESGSVEKVVLLTFSTVTLMAIQLNLVWVAVCDRLKIKNTYIV 60
Db 1 MORDLDANNSSESGSVEKVVLLTFSTVTLMAIQLNLVWVAVCDRLKIKNTYIV 60
Qy 61 SLAPADLLVSLVWMPGALVELVDIMYGEVFLVTSLDVLLTASIPHLCCSLDRY 120
Db 61 SLAPADLLVSLVWMPGALVELVDIMYGEVFLVTSLDVLLTASIPHLCCSLDRY 120
Qy 121 ALCCQPLVYNNMTPLRLALAGGVITPFISEFLPMOHNNGITIDLESRLNOGLQD 180
Db 121 ALCCQPLVYNNMTPLRLALAGGVITPFISEFLPMOHNNGITIDLESRLNOGLQD 180
Qy 181 FHAEKFNKNSNSYCVFVNNVYATLCSVVAFTPLKALVYLYVYAKENHAQI 240
Db 170 ---LEKFNKNSNSYCVFVNNVYATLCSVVAFTPLKALVYLYVYAKENHAQI 240
Qy 241 QMLGAGATSSSGPSQASHHTMTETAAKTLCIMGFCCLWAPFFVTVVDFID 300
Db 241 QMLGAGATSSSGPSQASHHTMTETAAKTLCIMGFCCLWAPFFVTVVDFID 300
Qy 301 YVYPCQVNTAFVLYNGSLNPLFLAFVNSFRFRLIILCCDENVYRSLQCTVPC 360
Db 287 YVYPCVNTAFVLYNGSLNPLFLAFVNSFRFRLIILCCDENVYRSLQCTVPC 360
Qy 361 STTTINGSHVLEADVCCGWSHCQCPATSPVVAQ 399
Db 347 STTTINGSHVLEADVCCGWSHCQCPATSPVVAQ 395

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RESULT 7
PCT-US93-12586-4
1 Sequence 4, Application PC/TUS9312586

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1 GENERAL INFORMATION:
2 APPLICANT: SYNAPTIC PHARMACEUTICAL CORPORATION
3 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS
4 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS
5 CORRESPONDENCE ADDRESS:
6 ADDRESS: COOPER & DUNHAM
7 STREET: 30 ROCKEFELLER PLAZA
8 CITY: NEW YORK
9 STATE: NEW YORK
10 ZIP: 10112
11 COMPUTER READABLE FORM:
12 MEDIUM TYPE: Floppy disk
13 OPERATING SYSTEM: PC-DOS/MS-DOS
14 SOFTWARE: Patent Release #1.24
15 CURRENT APPLICATION DATA: US/0893/12586
16 FILING DATE: June 1, 1995
17 CLASSIFICATION:
18 ATORNEY/AGENT INFORMATION:
19 NAME: Waite, P. John
20 REGISTRATION NUMBER: 28,678
21 REFERENCE/DOCKET NUMBER: 42667-A-PCT/JPM/TEP
22 TELECOMMUNICATION INFORMATION:
23 TELEPHONE: (212) 977-9550
24 TELEFAX: (212) 391-0525
25 INFORMATION FOR SEQ ID NO: 4:
26 SEQUENCE CHARACTERISTICS:
27 LENGTH: 406 amino acids
28 TYPE: amino acid
29 TOPOLOGY: linear
30 MOLECULE TYPE: protein
31 PCT-US93-12586-4

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Query Match 88.3%; Score 1884; DB 5; Length 406;
Best Local Similarity 89.2%; Pred. No. 2.7e-143;
Matches 356; Conservative 13; Mismatches 16; Indels 14; Gaps 1;

Qy 1 MOKLDANNSSESGSVEKVVLLTFSTVTLMAIQLNLVWVAVCDRLKIKNTYIV 60
Db 1 MORDLDANNSSESGSVEKVVLLTFSTVTLMAIQLNLVWVAVCDRLKIKNTYIV 60
Qy 61 SLAPADLLVSLVWMPGALVELVDIMYGEVFLVTSLDVLLTASIPHLCCSLDRY 120
Db 61 SLAPADLLVSLVWMPGALVELVDIMYGEVFLVTSLDVLLTASIPHLCCSLDRY 120
Qy 121 ALCCQPLVYNNMTPLRLALAGGVITPFISEFLPMOHNNGITIDLESRLNOGLQD 180
Db 121 ALCCQPLVYNNMTPLRLALAGGVITPFISEFLPMOHNNGITIDLESRLNOGLQD 180
Qy 181 FHAEKFNKNSNSYCVFVNNVYATLCSVVAFTPLKALVYLYVYAKENHAQI 240
Db 170 ---LEKFNKNSNSYCVFVNNVYATLCSVVAFTPLKALVYLYVYAKENHAQI 240
Qy 241 QMLGAGATSSSGPSQASHHTMTETAAKTLCIMGFCCLWAPFFVTVVDFID 300
Db 227 QMLGAGATSSSGPSQASHHTMTETAAKTLCIMGFCCLWAPFFVTVVDFID 286
Qy 301 YVYPCQVNTAFVLYNGSLNPLFLAFVNSFRFRLIILCCDENVYRSLQCTVPC 360
Db 287 YVYPCVNTAFVLYNGSLNPLFLAFVNSFRFRLIILCCDENVYRSLQCTVPC 346
Qy 361 STTTINGSHVLEADVCCGWSHCQCPATSPVVAQ 399
Db 347 STTTINGSHVLEADVCCGWSHCQCPATSPVVAQ 385

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RESULT 8
PCT-US93-12586-4
1 Sequence 4, Application US/09555313B
2 Patent No. 6506580

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GENERAL INFORMATION:

APPLICANT: FITCHMEISTER, Rudolph et al.
 TITLE OF INVENTION: 5-HT4 and uses thereof, in particular for screening of the human serotoninergic receptor
 FILE OF INVENTION: 5-HT4 and uses thereof, in particular for screening
 CURRENT APPLICATION NUMBER: US/09/555.313B
 PRIOR APPLICATION NUMBER: FR 97/15037
 PRIOR FILING DATE: 1997-11-28
 NUMBER OF SEQ ID NOS: 24
 SOFTWARE: Patent in Ver. 2.1
 SEQ ID NOS: 360
 LENGTH: 360

TYPE: PRT

ORGANISM: Homo sapiens

S-09-555-313B-4

Query Match 88.0%; Score 1877; DB 4; Length 360;

Best Local Similarity 95.2%; Pred. No. 7.1e-143; Matches 359; Conservative 0; Mismatches 4; Indels 14; Gaps 1;

Y 1 MKKLDANVSSRGSGVEKVVLLTFLSTVIMALGNLWAVWCVQRGLKIKNTFY 60
 D 1 MKKLDANVSSRGSGVEKVVLLTFLSTVIMALGNLWAVWCVQRGLKIKNTFY 60
 Y 61 SLAPADLLVYLWVPGKALVVDIYGVGVCLVTLSDVLTASIFLCCISLDYRY 120
 D 61 SLAPADLLVYLWVPGKALVVDIYGVGVCLVTLSDVLTASIFLCCISLDYRY 120
 Y 121 AICCPVAVNNMTPLRALMLGGCWIPFISPLPMQNNIGIDL----- 169
 D 121 AICCPVAVNNMTPLRALMLGGCWIPFISPLPMQNNIGIDL----- 169
 Y 181 FHATEKFNQNSSTCYVWKNKPAITCSVAVYIFLWLYAVRYVYTAHBAQI 240
 D 170 ----LEKGFQNSSTCYVWKNKPAITCSVAVYIFLWLYAVRYVYTAHBAQI 226
 Y 241 QMLRGAGSSEKPSQADQHSHTMRTETAATLCIMKQCLCNAPFFVTVVDFFID 300
 D 227 QMLRGAGSSEKPSQADQHSHTMRTETAATLCIMKQCLCNAPFFVTVVDFFID 286
 Y 301 YTVGQVQVATFLMGTINSLNPLVAFNLSFRAPFALILCCDDRVRPSLIQVVC 360
 D 287 YTVGQVQVATFLMGTINSLNPLVAFNLSFRAPFALILCCDDRVRPSLIQVVC 346
 Y 361 STTTINGSTHVLRAVE 377
 D 347 STTTINGSTHVLRSQTE 363

RESULT 10

US-09-555-313B-2

Sequence 24, Application US/09555313B

Patent No. 6506580

GENERAL INFORMATION:

APPLICANT: FITCHMEISTER, Rudolph et al.
 TITLE OF INVENTION: 5-HT4 and uses thereof, in particular for screening of the human serotoninergic receptor
 FILE OF INVENTION: 5-HT4 and uses thereof, in particular for screening
 CURRENT APPLICATION NUMBER: US/09/555.313B
 PRIOR APPLICATION NUMBER: FR 97/15037
 PRIOR FILING DATE: 1997-11-28
 NUMBER OF SEQ ID NOS: 24
 SOFTWARE: Patent in Ver. 2.1
 SEQ ID NOS: 760
 LENGTH: 760
 TYPE: PRT

ORGANISM: Homo sapiens

US-09-555-313B-2

Query Match 88.0%; Score 1877; DB 4; Length 760;

Best Local Similarity 95.2%; Pred. No. 1.8e-142; Matches 359; Conservative 0; Mismatches 4; Indels 14; Gaps 1;

Y 1 MKKLDANVSSRGSGVEKVVLLTFLSTVIMALGNLWAVWCVQRGLKIKNTFY 60
 D 1 MKKLDANVSSRGSGVEKVVLLTFLSTVIMALGNLWAVWCVQRGLKIKNTFY 60
 Y 61 SLAPADLLVYLWVPGKALVVDIYGVGVCLVTLSDVLTASIFLCCISLDYRY 120
 D 61 SLAPADLLVYLWVPGKALVVDIYGVGVCLVTLSDVLTASIFLCCISLDYRY 120
 Y 121 AICCPVAVNNMTPLRALMLGGCWIPFISPLPMQNNIGIDL----- 169
 D 121 AICCPVAVNNMTPLRALMLGGCWIPFISPLPMQNNIGIDL----- 169
 Y 181 FHATEKFNQNSSTCYVWKNKPAITCSVAVYIFLWLYAVRYVYTAHBAQI 240
 D 170 ----LEKGFQNSSTCYVWKNKPAITCSVAVYIFLWLYAVRYVYTAHBAQI 226
 Y 241 QMLRGAGSSEKPSQADQHSHTMRTETAATLCIMKQCLCNAPFFVTVVDFFID 300

RESULT 9

S-09-555-313B-24

Sequence 24, Application US/09555313B

Patent No. 6506580

GENERAL INFORMATION:

APPLICANT: FITCHMEISTER, Rudolph et al.
 TITLE OF INVENTION: 5-HT4 and uses thereof, in particular for screening of the human serotoninergic receptor
 FILE OF INVENTION: 5-HT4 and uses thereof, in particular for screening
 CURRENT APPLICATION NUMBER: US/09/555.313B
 PRIOR APPLICATION NUMBER: FR 97/15037
 PRIOR FILING DATE: 1997-11-28
 NUMBER OF SEQ ID NOS: 24
 SOFTWARE: Patent in Ver. 2.1
 SEQ ID NOS: 380
 LENGTH: 380

TYPE: PRT

ORGANISM: Homo sapiens

S-09-555-313B-24

Query Match 88.0%; Score 1877; DB 4; Length 380;

Best Local Similarity 95.2%; Pred. No. 9e-143;

Db 227 ONLQAGSSSESPQADQSHTHMRTTDAKTLCLNCCFCCLCWPFFVTVVDFPD 286
 Qy 301 YTVPGQWTFALMGVYNSGLNPLFYAFNSFRAEALILCCDDXRRRSILGQVPC 360
 Db 287 YTVPGQWTFALMGVYNSGLNPLFYAFNSFRAEALILCCDDXRRRSILGQVPC 346
 Qy 361 SITTINGSHVLDAVE 377
 Db 347 SITTINGSHVLSGTS 363

RESULT 11
 US-07-996-772A-2

Sequence 2, Application US/07996772A

Patent No. 5422665

GENERAL INFORMATION:

APPLICANT: Gerald, Christophe

APPLICANT: Battig, Paul R.

APPLICANT: Weiss, A.

APPLICANT: Weinbank, Richard L.

TITLE OF INVENTION: DNA ENCODING 5-HT4A SEROTONIN

TITLE OF INVENTION: RECEPTORS AND USES THEREOF

INVENTOR: COOPER, ANDREW S.

CORRESPONDENCE ADDRESS:

ADDRESSEE: COOPER & DUNHAM

STREET: 30 ROCKEFELLER PLAZA

CITY: NEW YORK

STATE: NEW YORK

ZIP: 10112

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.24

CURRENT APPLICATION DATA:

FILED DATE NUMBER: US/07996,772A

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: White, P., John

REFERENCE/DOCKET NUMBER: 42667

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 977-9550

TELEX: 422523 COOP U

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 387 amino acids

TOPOLOGY: linear

MOLECULE TYPE: protein

US-07-996-772A-2

Query Match

Best Local Similarity : 82.9%; Pred. No. 4, 1e-134;

Matches 338; Conservative 11; Mismatches 18; Indels 14; Gaps 1;

Qy 1 MORDLVANSSERGSVEKVVLLFTSLTSLTALNGLNVAWVCRQRLKNTNIV 60

Db 1 MORDLVANSSERGSVEKVVLLFTSLTSLTALNGLNVAWVCRQRLKNTNIV 60

Qy 61 SLAPADLVSLVYNAFAELVDIMYTGEMCVLTSLDVLTASTIPLHCCISLDRTY 120

Db 61 SLAPADLVSLVYNAFAELVDIMYTGEMCVLTSLDVLTASTIPLHCCISLDRTY 120

Qy 121 ATCCQAVYNNMPTPALNMGCCVTPWFSFPMQNNKIGLVV-----169

Db 121 ATCCQAVYNNMPTPALNMGCCVTPWFSFPMQNNKIGLVV-----169

Qy 181 FHAIERKFNQNSSTCYVMWNPKATCSVWAPITFPLATLAYRYITAKEHADI 240

Db 181 FHAIERKFNQNSSTCYVMWNPKATCSVWAPITFPLATLAYRYITAKEHADI 240

Db 170 ---TERKFRNNSSTCYVMWNPKATCSVWAPITFPLATLAYRYITAKEHADI 246
 Qy 241 ONLQAGSSSESPQADQSHTHMRTTDAKTLCLNCCFCCLCWPFFVTVVDFPD 300
 Db 227 ONLQAGSSSESPQADQSHTHMRTTDAKTLCLNCCFCCLCWPFFVTVVDFPD 286
 Qy 301 YTVPGQWTFALMGVYNSGLNPLFYAFNSFRAEALILCCDDXRRRSILGQVPC 360
 Db 287 YTVPGQWTFALMGVYNSGLNPLFYAFNSFRAEALILCCDDXRRRSILGQVPC 346
 Qy 361 SITTINGSHVLDAVE 377
 Db 347 SITTINGSHVLSGTS 363

RESULT 12

US-08-446-822-2

Sequence 2, Application US/08416822

Patent No. 5768979

GENERAL INFORMATION:

APPLICANT: SYNAPTIC PHARMACEUTICAL CORPORATION

TITLE OF INVENTION: DNA ENCODING 5-HT_{1A} SEROTONIN RECEPTORS

TITLE OF INVENTION: AND USES THEREOF

INVENTOR: COOPER, ANDREW S.

CORRESPONDENCE ADDRESS:

ADDRESSEE: COOPER & DUNHAM

STREET: 30 ROCKEFELLER PLAZA

CITY: NEW YORK

STATE: NEW YORK

ZIP: 10112

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.30

CURRENT APPLICATION DATA:

FILED DATE NUMBER: US/08/446,822

CLASSIFICATION: 800, 1395

ATTORNEY/AGENT INFORMATION:

NAME: White, P., John

REFERENCE/DOCKET NUMBER: 42667-A-PCT-US/JPM/WAT

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 278-0400

TELEX: 422523 COOP U

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 387 amino acids

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-446-822-2

Query Match

Best Local Similarity : 82.9%; Score 1769; DB 1; Length 387;

Matches 338; Conservative 11; Mismatches 18; Indels 14; Gaps 1;

Qy 1 MORDLVANSSERGSVEKVVLLFTSLTSLTALNGLNVAWVCRQRLKNTNIV 60

Db 1 MORDLVANSSERGSVEKVVLLFTSLTSLTALNGLNVAWVCRQRLKNTNIV 60

Qy 61 SLAPADLVSLVYNAFAELVDIMYTGEMCVLTSLDVLTASTIPLHCCISLDRTY 120

Db 61 SLAPADLVSLVYNAFAELVDIMYTGEMCVLTSLDVLTASTIPLHCCISLDRTY 120

Qy 121 ATCCQAVYNNMPTPALNMGCCVTPWFSFPMQNNKIGLVV-----169

Db 121 ATCCQAVYNNMPTPALNMGCCVTPWFSFPMQNNKIGLVV-----169

Qy 181 FHAIERKFNQNSSTCYVMWNPKATCSVWAPITFPLATLAYRYITAKEHADI 240

Db 181 FHAIERKFNQNSSTCYVMWNPKATCSVWAPITFPLATLAYRYITAKEHADI 240

y 241 QMORAGASERPSQASQDSHRTETKAATLGIIMGTCFLCAWPPFTVINVDFFID 300
 b 227 QMORAGASERPSQASQDSHRTETKAATLGIIMGTCFLCAWPPFTVINVDFFID 286
 y 301 YTPQGVWAFWMTYNGSLNPFYAFUNSPRAFLIILCCDDYRPSILGQVPC 360
 b 287 YTPGVKMTAFWMTYNGSLNPFYAFUNSPRAFLIILCCDDYRPSILGQVPC 346
 y 361 SITTINGSTVLRAVCEGQ 381
 b 347 SITTINGSTVLRAVCEGQ 367

RESULT 13
 S-09-328-314-2
 Sequence 2, Application US/09128314
 GENERAL INFORMATION:
 APPLICANT: Gerald, Christophe
 APPLICANT: Hartig, Paul R.
 APPLICANT: Branchek, Theresa L.
 APPLICANT: Branchek, Theresa L.
 TITLE OF INVENTION: DNA Encoding 5-HT4 Serotonin Receptors And Uses Thereof
 FILE REFERENCE: 42667-A2-PCT-US
 CURRENT APPLICATION NUMBER: US/09/328.314
 EARLIER APPLICATION NUMBER: 08/446,822
 EARLIER FILING DATE: 1995-07-31
 EARLIER APPLICATION NUMBER: PCT/US93/12586
 EARLIER FILING DATE: 1992-12-24
 EARLIER APPLICATION NUMBER: 07/696,772
 EARLIER FILING DATE: 1992-12-24
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent In Ver. 2.1
 SEQ ID NO 387
 LENGTH: 387
 TYPE: PRT
 ORGANISM: Rattus norvegicus

S-09-328-314-2
 Query Match 82.9%; Score 1769; DB 4; Length 387;
 Best Local Similarity 88.7%; Pred. No. 4,1e-134;
 Matches 338; Conservative 11; Mismatches 18; Indels 14; Gaps 1;
 y 1 MOKLDANVSESGSVEKVLITFTSLVIMALGNLWVAVCDQRQRLKNTYIV 60
 b 1 MOKLDANVSESGSVEKVLITFTSLVIMALGNLWVAVCDQRQRLKNTYIV 60
 y 61 SLAFADLVSVLWVAFGALTELVODIYVFGVCLVTSLDVLTASTPHLCCISLDYV 120
 b 61 SLAFADLVSVLWVAFGALTELVODIYVFGVCLVTSLDVLTASTPHLCCISLDYV 120
 y 121 ALICOPVLYNNKTFPLRATMGCGWVTFSTPLFMOGNNGIIVDW----- 169
 b 121 ALICOPVLYNNKTFPLRATMGCGWVTFSTPLFMOGNNGIIVDW----- 169
 y 181 FHAIKGEKPNQSNSTYCFVWPKVPAITCSVAVKTFPLFVLWVATVYVTAKEHQI 240
 b 170 ----ISGKFNQSNSTYCFVWPKVPAITCSVAVKTFPLFVLWVATVYVTAKEHQI 226
 y 241 QMORAGASERPSQASQDSHRTETKAATLGIIMGTCFLCAWPPFTVINVDFFID 300
 b 227 QMORAGASERPSQASQDSHRTETKAATLGIIMGTCFLCAWPPFTVINVDFFID 286
 y 301 YTPQGVWAFWMTYNGSLNPFYAFUNSPRAFLIILCCDDYRPSILGQVPC 360
 b 287 YTPGVKMTAFWMTYNGSLNPFYAFUNSPRAFLIILCCDDYRPSILGQVPC 346
 y 361 SITTINGSTVLRAVCEGQ 381
 b 347 SITTINGSTVLRAVCEGQ 367

RESULT 14
 PCT-US93-12586-2
 Sequence 2, Application PCT/US93/12586
 GENERAL INFORMATION:
 APPLICANT: SYNAPTIC PHARMACEUTICAL CORPORATION
 TITLE OF INVENTION: DNA ENCODING 5-HT4 SEROTONIN RECEPTORS
 AND USES THEREOF
 FILE REFERENCE: 42667-A2-PCT-US
 CURRENT APPLICATION NUMBER: PCT/US93/12586
 EARLIER APPLICATION NUMBER: 08/446,822
 EARLIER FILING DATE: 1995-07-31
 EARLIER APPLICATION NUMBER: PCT/US93/12586
 EARLIER FILING DATE: 1992-12-24
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent In Ver. 2.1
 SEQ ID NO 387
 LENGTH: 387
 TYPE: PRT
 ORGANISM: Rattus norvegicus

S-09-328-314-2
 Query Match 82.9%; Score 1769; DB 5; Length 387;
 Best Local Similarity 88.7%; Pred. No. 4,1e-134;
 Matches 338; Conservative 11; Mismatches 18; Indels 14; Gaps 1;
 y 1 MOKLDANVSESGSVEKVLITFTSLVIMALGNLWVAVCDQRQRLKNTYIV 60
 b 1 MOKLDANVSESGSVEKVLITFTSLVIMALGNLWVAVCDQRQRLKNTYIV 60
 y 61 SLAFADLVSVLWVAFGALTELVODIYVFGVCLVTSLDVLTASTPHLCCISLDYV 120
 b 61 SLAFADLVSVLWVAFGALTELVODIYVFGVCLVTSLDVLTASTPHLCCISLDYV 120
 y 121 ALICOPVLYNNKTFPLRATMGCGWVTFSTPLFMOGNNGIIVDW----- 169
 b 121 ALICOPVLYNNKTFPLRATMGCGWVTFSTPLFMOGNNGIIVDW----- 169
 y 181 FHAIKGEKPNQSNSTYCFVWPKVPAITCSVAVKTFPLFVLWVATVYVTAKEHQI 240
 b 170 ----ISGKFNQSNSTYCFVWPKVPAITCSVAVKTFPLFVLWVATVYVTAKEHQI 226
 y 241 QMORAGASERPSQASQDSHRTETKAATLGIIMGTCFLCAWPPFTVINVDFFID 300
 b 227 QMORAGASERPSQASQDSHRTETKAATLGIIMGTCFLCAWPPFTVINVDFFID 286
 y 301 YTPQGVWAFWMTYNGSLNPFYAFUNSPRAFLIILCCDDYRPSILGQVPC 360
 b 287 YTPGVKMTAFWMTYNGSLNPFYAFUNSPRAFLIILCCDDYRPSILGQVPC 346
 y 361 SITTINGSTVLRAVCEGQ 381
 b 347 SITTINGSTVLRAVCEGQ 367

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Search completed: August 5, 2004, 13:36:37
Job time : 20 secs

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4 protein - protein search, using sw model

in on: August 5, 2004, 13:35:20 | Search time 46 Seconds

(Without alignments)

2741.316 Million cell updates/sec

title: US-10-018-257a-2

effect score: 2133

sequence: 1 MUKLDANVSEFGSGVEKV.....EQCHPAPSPVVAQPSOT 402

coreg table: BLOSUM62

searched: Gapop 10.0 | Gapext 0.5

total number of hits satisfying chosen parameters: 1291235

Minimum DB seq length: 0

Maximum Match 100%

Maximum Match 100%

Listing first 45 summaries

Published Applications AA:*

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18: /cgn2_6/prodata/1/pubpaa/US06_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a
score as high as that equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

seq	Score	Match	Length	ID	Description
1	2042	95.7	388	14	US-10-018-257a-2
2	2042	95.7	388	14	US-10-157-031-123
3	2042	95.7	388	14	US-10-157-031-124
4	2042	95.7	388	14	US-10-225-567A-18
5	2037	95.5	388	11	US-09-826-509-439
6	1886	88.4	406	9	US-09-889-861-4
7	1886	88.4	406	9	US-09-889-861-4
8	1879	88.1	387	14	US-10-318-561-23
9	1874	87.9	387	11	US-09-826-509-436
10	1872	87.8	387	11	US-09-826-509-437
11	1872	87.8	380	11	US-09-826-509-441
12	1869.5	87.6	378	11	US-09-826-509-445
13	1769	82.9	387	9	US-09-889-861-2
14	1239	58.1	261	9	US-09-889-861-15
15	339	41.0	278	9	US-09-889-861-6

Sequence 26, Appl
Sequence 69, Appl
Sequence 7, Appl
Sequence 30, Appl
Sequence 98, Appl
Sequence 2, Appl
Sequence 4, Appl
Sequence 636, Appl
Sequence 32, Appl
Sequence 28, Appl
Sequence 16, Appl
Sequence 5, Appl
Sequence 62, Appl
Sequence 11, Appl
Sequence 20, Appl
Sequence 49, Appl
Sequence 43, Appl
Sequence 2, Appl
Sequence 100, Appl
Sequence 8, Appl
Sequence 10, Appl
Sequence 52, Appl
Sequence 48, Appl
Sequence 34, Appl

ALIGNMENTS

RESULT 1
US-09-589-861-8
; Sequence 8, Application US/0989861
; Patent No. US20020091661A1
; GENERAL INFORMATION
; APPLICANT: Hartig, Christophe
; APPLICANT: Branchek, Theresa
; APPLICANT: Meinhank, Richard L.
; TITLE OF INVENTION: Therapeutic 5-HT₂ Serotonin Receptors And Uses
; FILE REFERENCE: 42667-A2-PCT-US
; CURRENT APPLICATION NUMBER: US/09/989,861
; CURRENT FILING DATE: 2000-09-15
; PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/US93/12586
; PRIOR FILING DATE: EARLIER FILING DATE: 1993-12-22
; PRIOR FILING DATE: EARLIER FILING DATE: 07/996,772
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 989
; TYPE: PFT
; ORGANISM: Homo sapiens

Query Watch 95.7%; Score 2042; P8 9; Length 388;
Best Local Similarity 95.7%; Pred. No. 6.6e-185;
Matches 388; Conservative 0; Mismatches 0;

1 MUKLDANVSEFGSGVEKVFLSTVIMALGNLWVAWCDRLKIKNTFV 60
1 MUKLDANVSEFGSGVEKVFLSTVIMALGNLWVAWCDRLKIKNTFV 60

63 STAPARLVNIDPQALTELKVDYINVEVCLSTSLDTATFSLFACLSLDYV 120

Db 61 SIAPADLLVSLVMPFGAIELVDIWIYGEVFLVRTSLDLVLTASIFHLCCISLDIY 120
 Qy 121 ATCCQPLVYRHWOTPLRIALMLGGCWIPFTISFLPIPMQNNNGIGTIDERSLNOGLQD 180
 Db 121 ATCCQPLVYRHWOTPLRIALMLGGCWIPFTISFLPIPMQNNNGIGTIDERSLNOGLQD 180
 Qy 181 FHAIENKFNQNSSTCYVFNWKPATCSVAFIPFLMLVLAIRYVYAKEHAHQI 226
 Db 170 ----IERKFNQNSSTCYVFNWKPATCSVAFIPFLMLVLAIRYVYAKEHAHQI 226
 Qy 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 240
 Db 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 240
 Qy 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 240
 Db 227 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 286
 Qy 301 YTVPGQVWTFATFLMGTINSGLNPFVAFJLNSFRFALLIICCDERYRPSLGGTQVPC 360
 Db 301 YTVPGQVWTFATFLMGTINSGLNPFVAFJLNSFRFALLIICCDERYRPSLGGTQVPC 360
 Qy 361 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 402
 Db 347 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 388

RESULT 2

US-10-157-031-123
 ; Sequence 123, Application US/10157031
 ; Publication No. US20030108890A1

; GENERAL INFORMATION:
 ; APPLICANT: Baranova, A. V.
 ; APPLICANT: Kozlov, A. P.
 ; APPLICANT: Lobahev, A. V.
 ; APPLICANT: Krukovskaya, L. L.

; FILE REFERENCE: 2750-103
 ; CURRENT APPLICATION NUMBER: US/10/157,031
 ; CURRENT FILING DATE: 2002-05-30
 ; NUMBER OF SEQ ID NOS: 415
 ; SOFTWARE: SeqMan 4.5.2
 ; SEQ ID NO 123
 ; LENGTH: 388
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens

US-10-157-031-123

Query Match
 Best Local Similarity 95.74; Score 2042; DB 14; Length 388;
 Matches 388; Conservative 0; Mismatches 0; Indels 14; Gaps 1;

Qy 1 MOKLDANYSSEEGSGYERKVVLTFTSLVLAIGLNLVWAVCMQRLKIKTNFIV 60
 Db 1 MOKLDANYSSEEGSGYERKVVLTFTSLVLAIGLNLVWAVCMQRLKIKTNFIV 60
 Qy 61 SIAPADLLVSLVMPFGAIELVDIWIYGEVFLVRTSLDLVLTASIFHLCCISLDIY 120
 Db 61 SIAPADLLVSLVMPFGAIELVDIWIYGEVFLVRTSLDLVLTASIFHLCCISLDIY 120
 Qy 121 ATCCQPLVYRHWOTPLRIALMLGGCWIPFTISFLPIPMQNNNGIGTIDERSLNOGLQD 180
 Db 121 ATCCQPLVYRHWOTPLRIALMLGGCWIPFTISFLPIPMQNNNGIGTIDERSLNOGLQD 180
 Qy 181 FHAIENKFNQNSSTCYVFNWKPATCSVAFIPFLMLVLAIRYVYAKEHAHQI 240
 Db 170 ----IERKFNQNSSTCYVFNWKPATCSVAFIPFLMLVLAIRYVYAKEHAHQI 240
 Qy 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 226
 Db 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 226
 Qy 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 226
 Db 227 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 286
 Qy 301 YTVPGQVWTFATFLMGTINSGLNPFVAFJLNSFRFALLIICCDERYRPSLGGTQVPC 360
 Db 301 YTVPGQVWTFATFLMGTINSGLNPFVAFJLNSFRFALLIICCDERYRPSLGGTQVPC 360
 Qy 361 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 402
 Db 347 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 388

RESULT 4

US-10-225-567A-18
 ; Sequence 18, Application US/10225567A
 ; Publication No. US2003013798A1

; GENERAL INFORMATION:
 ; APPLICANT: Lifespan Biotechnologies
 ; APPLICANT: Brown, Joseph P.
 ; APPLICANT: Burner, Glenn C.
 ; APPLICANT: Smith, Christine
 ; APPLICANT: Winer, Robert
 ; FILE REFERENCE: 1920-4-4
 ; CURRENT APPLICATION NUMBER: US/10/225,567A
 ; CURRENT FILING DATE: 2001-12-19

Qy 361 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 402
 Db 347 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 388

RESULT 3

US-10-157-031-124
 ; Sequence 124, Application US/10157031
 ; Publication No. US20030108890A1

; GENERAL INFORMATION:
 ; APPLICANT: Baranova, A. V.
 ; APPLICANT: Kozlov, A. P.
 ; APPLICANT: Lobahev, A. V.
 ; APPLICANT: Krukovskaya, L. L.

; FILE REFERENCE: 2750-103
 ; CURRENT APPLICATION NUMBER: US/10/157,031
 ; CURRENT FILING DATE: 2002-05-30
 ; NUMBER OF SEQ ID NOS: 415
 ; SOFTWARE: SeqMan 4.5.2
 ; SEQ ID NO 124
 ; LENGTH: 388
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens

US-10-157-031-124
 ; Sequence 124, Application US/10157031
 ; Publication No. US20030108890A1

; GENERAL INFORMATION:
 ; APPLICANT: Baranova, A. V.
 ; APPLICANT: Kozlov, A. P.
 ; APPLICANT: Lobahev, A. V.
 ; APPLICANT: Krukovskaya, L. L.

; FILE REFERENCE: 2750-103
 ; CURRENT APPLICATION NUMBER: US/10/157,031
 ; CURRENT FILING DATE: 2002-05-30
 ; NUMBER OF SEQ ID NOS: 415
 ; SOFTWARE: SeqMan 4.5.2
 ; SEQ ID NO 124
 ; LENGTH: 388
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens

US-10-157-031-124

Query Match
 Best Local Similarity 95.74; Score 2042; DB 14; Length 388;
 Matches 388; Conservative 0; Mismatches 0; Indels 14; Gaps 1;

Qy 1 MOKLDANYSSEEGSGYERKVVLTFTSLVLAIGLNLVWAVCMQRLKIKTNFIV 60
 Db 1 MOKLDANYSSEEGSGYERKVVLTFTSLVLAIGLNLVWAVCMQRLKIKTNFIV 60
 Qy 61 SIAPADLLVSLVMPFGAIELVDIWIYGEVFLVRTSLDLVLTASIFHLCCISLDIY 120
 Db 61 SIAPADLLVSLVMPFGAIELVDIWIYGEVFLVRTSLDLVLTASIFHLCCISLDIY 120
 Qy 121 ATCCQPLVYRHWOTPLRIALMLGGCWIPFTISFLPIPMQNNNGIGTIDERSLNOGLQD 180
 Db 121 ATCCQPLVYRHWOTPLRIALMLGGCWIPFTISFLPIPMQNNNGIGTIDERSLNOGLQD 180
 Qy 181 FHAIENKFNQNSSTCYVFNWKPATCSVAFIPFLMLVLAIRYVYAKEHAHQI 240
 Db 170 ----IERKFNQNSSTCYVFNWKPATCSVAFIPFLMLVLAIRYVYAKEHAHQI 240
 Qy 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 226
 Db 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 226
 Qy 241 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 226
 Db 227 OMORAGASSESPQADQSTHRTMTTAAKTLCIMGFCFLCWAFFVYVYAKEHAHQI 286
 Qy 301 YTVPGQVWTFATFLMGTINSGLNPFVAFJLNSFRFALLIICCDERYRPSLGGTQVPC 360
 Db 301 YTVPGQVWTFATFLMGTINSGLNPFVAFJLNSFRFALLIICCDERYRPSLGGTQVPC 360
 Qy 361 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 402
 Db 347 STITTINGSTHVLADAEVCGQWESQCHPPATSPVLAQPSDT 388

PRIOR APPLICATION NUMBER: 60/257,144
 PRIOR FILING DATE: 2000-12-19
 INVENTOR: CHEN W.
 SOFTWARE: Patent in version 3.1
 SEQ ID NO 18
 LENGTH: 388
 ORGANISM: Homo sapiens
 3-10-225-567A-18

Query Match: 95.7%; Score 2042; DB 14; Length 388;
 Local Similarity 95.5%; Pred. No. 6,68-18; Indels 14; Gaps 1;
 Matches 388; Conservative 0; Mismatches 14;

1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 2
 3 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 4
 5 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 6
 7 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 8
 9 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 10
 11 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 12
 13 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 14
 15 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 16
 17 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
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 19 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
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 21 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
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 23 181 FHAIKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 240
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 25 170 ---TERKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 226
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 27 241 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 300
 28
 29 227 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 286
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 31 301 YTVPGQVWTFALMGYINSLNPLFVAFNKSFRAPFLILCCDDERFRPSILGQTVPC 360
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 33 287 YTVPGQVWTFALMGYINSLNPLFVAFNKSFRAPFLILCCDDERFRPSILGQTVPC 346
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 35 361 SITTINGSTHVLDAVTCGQSQWESQCHPPATSPVAAOPSDT 402
 36
 37 347 SITTINGSTHVLDAVTCGQSQWESQCHPPATSPVAAOPSDT 388
 38

ESLT 5
 Sequence 439, Application US/09826509
 Publication No. US20030204073A1
 INVENTOR: CHEN W.
 SOFTWARE: Patent in version 3.1
 SEQ ID NO 388
 ORGANISM: Homo sapiens
 S-09-826-509-439

Query Match: 95.4%; Score 2037; DB 11; Length 388;
 Local Similarity 95.3%; Pred. No. 6,68-18; Indels 14; Gaps 1;
 Matches 387; Conservative 0; Mismatches 14;

1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 2
 3 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 4
 5 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 6
 7 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 8
 9 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 10
 11 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 12
 13 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 14
 15 181 FHAIKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 240
 16
 17 170 ---TERKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 226
 18
 19 241 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 300
 20
 21 227 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 286
 22
 23 301 YTVPGQVWTFALMGYINSLNPLFVAFNKSFRAPFLILCCDDERFRPSILGQTVPC 360
 24
 25 287 YTVPGQVWTFALMGYINSLNPLFVAFNKSFRAPFLILCCDDERFRPSILGQTVPC 346
 26
 27 361 SITTINGSTHVLDAVTCGQSQWESQCHPPATSPVAAOPSDT 402
 28
 29 347 SITTINGSTHVLDAVTCGQSQWESQCHPPATSPVAAOPSDT 388
 30

Db 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 Qy 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 Db 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 Qy 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 Db 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 Qy 181 FHAIKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 240
 Db 170 ---TERKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 226
 Qy 241 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 300
 Db 227 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 286
 Qy 301 YTVPGQVWTFALMGYINSLNPLFVAFNKSFRAPFLILCCDDERFRPSILGQTVPC 360
 Db 287 YTVPGQVWTFALMGYINSLNPLFVAFNKSFRAPFLILCCDDERFRPSILGQTVPC 346
 Qy 361 SITTINGSTHVLDAVTCGQSQWESQCHPPATSPVAAOPSDT 402
 Db 347 SITTINGSTHVLDAVTCGQSQWESQCHPPATSPVAAOPSDT 388

RESULT 6
 US-10-092-771-3
 ; Sequence 3, Application US/10092771
 ; Publication No. US20030064381A1
 ; INVENTOR: CHEN W.
 ; SOFTWARE: Patent in version 3.1
 ; SEQ ID NO 388
 ; ORGANISM: Homo sapiens
 ; S-10-092-771-3
 ; TITLE OF INVENTION: POLYNUCLEOTIDE ENCODING A NOVEL HUMAN G-PROTEIN COUPLED RECEPTOR
 ; FILE REFERENCE: POL2122, NUMBER, US/10/092, 771
 ; CURRENT FILING DATE: 2002-03-07
 ; PRIOR FILING DATE: 2001-03-07
 ; PRIOR FILING DATE: 2001-03-07
 ; PRIOR FILING DATE: 2001-03-07
 ; NUMBER OF SEQ ID NOS: 76
 ; SOFTWARE: Patent in version 3.0
 ; SEQ ID NO 388
 ; TYPE: PRT
 ; ORGANISM: CAVIA PORCELLUS
 ; US-10-092-771-3

Query Match: 91.6%; Score 1954; DB 12; Length 388;
 Best Local Similarity 92.0%; Pred. No. 1,48-176;
 Matches 370; Conservative 8; Mismatches 10; Indels 14; Gaps 1;
 Qy 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 Db 1 MOKLDANVSSBEGSGSVEKVYLLTSTVILMALGNLWVAVCWQRQKIKNTFY 60
 Qy 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 Db 61 SLAFADLVSVLWMPFGALRELVQDITGYEFLVWTSLSVLTLTASIFHLCCISLDURY 120
 Qy 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 Db 121 AICCPFLVNNKMTPEFLALMGCCGWITPFIISFPGQNNIGIIDLERSLNGLOD 180
 Qy 181 FHAIKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 240
 Db 170 ---TERKPKQNSNSTCVFNNKPAITCSVAVFIPELLWLVAVRYVTAKHAHQI 226
 Qy 241 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 300
 Db 227 QMLGRAGSSESPQSDQSHETMRKTAATKTCIIMGCFLCWAPFFVTVDFDIP 286

Db 227 QVLQKQAPABRQPDQDQHTHRKTYETAAKTLCLIMKQFLCNAFFVTVNVPDIF 266
 Qy 301 YTVGGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 360
 Db 287 YTVPGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 346
 Qy 361 STITTSNGTHVLVDVCCQWSQCHPQATSEFLVAQPDIT 402
 Db 347 STITTSNGTHVLVDVCCQWSQCHPQATSEFLVAQPDIT 388
 RESULT 7
 US-09-383-861-4
 ; Sequence 436, Application US/09989861
 ; Publication No. US2003020473A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Gerald, Christophe
 ; APPLICANT: Hartig, Paul R.
 ; APPLICANT: Weinbank, Richard L.
 ; TITLE OF INVENTION: DNA Encoding 5-HT₂ Serotonin Receptors And Uses
 ; TITLE OF INVENTION: Thereof
 ; CURRENT APPLICATION NUMBER: US 09/989,861
 ; PRIOR FILING DATE: 2001-11-19
 ; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/328,314
 ; PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
 ; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/US93/12586
 ; PRIOR FILING DATE: EARLIER FILING DATE: 1993-12-22
 ; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 07/956,772
 ; PRIOR FILING DATE: EARLIER FILING DATE: 1992-12-24
 ; PRIOR FILING SEQ ID NOS: 19
 ; SOFTWARE: PatScan Ver. 2.1
 ; SEQ ID NO 4
 ; LENGTH: 406
 ; TYPE: PRT
 ; ORGANISM: Rattus norvegicus
 US-09-383-861-4

Query Match Local Similarity 88.41; Score 1886; DB 9; Length 406;
 Best Local Similarity 89.54; Pred. No. 4.3e-170;
 Matches 357; Conservative 12; Mismatches 28; Indels 14; Gaps 1;
 Qy 1 MCKLDANVSSEEGSVKVVLLFTASTVLMALANLWAVAVCDQRLKINTYIV 60
 Db 1 MCKLDANVSSEEGSVKVVLLFTASTVLMALANLWAVAVCDQRLKINTYIV 60
 Qy 61 SIAPADLLVNLVMPFGAELVDDIMYGVSEVCLVRSLLDVLTTASIFHLCCISLDRT 120
 Db 61 SIAPADLLVNLVMPFGAELVDDIMYGVSEVCLVRSLLDVLTTASIFHLCCISLDRT 120
 Qy 121 ALCQPLVYKMTPLALMLGGCVITPFIISFLPMQNNIGIDILERSLMOGLQD 180
 Db 121 ALCQPLVYKMTPLALMLGGCVITPFIISFLPMQNNIGIDILERSLMOGLQD 180
 Qy 181 FHAIKERNKNSNTCYVMKNVYATCSVAVTIPFLMLVLYRYVYAKEHAQI 240
 Db 170 ---LEKRFKNNNSCTCYVMKNVYATCSVAVTIPFLMLVLYRYVYAKEHAQI 226
 Qy 241 QMLQAGASSESPQASQDSQTHMTATKAATCTICIMGCFCNAFFVTVNVPDIF 300
 Db 227 QMLQAGASSESPQASQDSQTHMTATKAATCTICIMGCFCNAFFVTVNVPDIF 286
 Qy 301 YTVGGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 360
 Db 287 YTVPGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 346
 Qy 181 FHAIKERNKNSNTCYVMKNVYATCSVAVTIPFLMLVLYRYVYAKEHAQI 240
 Db 170 ---LEKRFKNNNSCTCYVMKNVYATCSVAVTIPFLMLVLYRYVYAKEHAQI 226
 Qy 241 QMLQAGASSESPQASQDSQTHMTATKAATCTICIMGCFCNAFFVTVNVPDIF 300
 Db 227 QMLQAGASSESPQASQDSQTHMTATKAATCTICIMGCFCNAFFVTVNVPDIF 286
 Qy 301 YTVGGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 360
 Db 287 YTVPGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 346
 Qy 361 STITTSNGTHVLVDVCCQWSQCHPQATSEFLVAQPDIT 402
 Db 347 STITTSNGTHVLVDVCCQWSQCHPQATSEFLVAQPDIT 388
 RESULT 8

US-10-318-661-23
 ; Sequence 436, Application US/10318661
 ; Publication No. US20030167476A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Conklin, Bruce R.
 ; APPLICANT: Saito, Shigehisa
 ; TITLE OF INVENTION: Suppression of A G Protein-Coupled Receptor Activated
 ; TITLE OF INVENTION: Superiorly By Synthetic Ligand
 ; FILE REFERENCE: UCAL-045CIP2
 ; CURRENT APPLICATION NUMBER: US/10/318,661
 ; PRIOR FILING DATE: 1999-12-20
 ; PRIOR APPLICATION NUMBER: US 09/341,446
 ; PRIOR FILING DATE: 1999-12-20
 ; PRIOR APPLICATION NUMBER: PCT/US97/05334
 ; PRIOR FILING DATE: 1996-03-26
 ; PRIOR APPLICATION NUMBER: US 08/622,348
 ; PRIOR FILING DATE: 1996-03-26
 ; NUMBER OF SEQ ID NOS: 28
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 21
 ; LENGTH: 387
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-318-661-23
 Query Match Local Similarity 88.11; Score 1879; DB 14; Length 387;
 Best Local Similarity 89.71; Pred. No. 1.9e-169;
 Matches 360; Conservative 0; Mismatches 2; Indels 14; Gaps 1;
 Qy 1 MCKLDANVSSEEGSVKVVLLFTASTVLMALANLWAVAVCDQRLKINTYIV 60
 Db 1 MCKLDANVSSEEGSVKVVLLFTASTVLMALANLWAVAVCDQRLKINTYIV 60
 Qy 61 SIAPADLLVNLVMPFGAELVDDIMYGVSEVCLVRSLLDVLTTASIFHLCCISLDRT 120
 Db 61 SIAPADLLVNLVMPFGAELVDDIMYGVSEVCLVRSLLDVLTTASIFHLCCISLDRT 120
 Qy 121 ALCQPLVYKMTPLALMLGGCVITPFIISFLPMQNNIGIDILERSLMOGLQD 180
 Db 121 ALCQPLVYKMTPLALMLGGCVITPFIISFLPMQNNIGIDILERSLMOGLQD 180
 Qy 181 FHAIKERNKNSNTCYVMKNVYATCSVAVTIPFLMLVLYRYVYAKEHAQI 240
 Db 170 ---LEKRFKNNNSCTCYVMKNVYATCSVAVTIPFLMLVLYRYVYAKEHAQI 226
 Qy 241 QMLQAGASSESPQASQDSQTHMTATKAATCTICIMGCFCNAFFVTVNVPDIF 300
 Db 227 QMLQAGASSESPQASQDSQTHMTATKAATCTICIMGCFCNAFFVTVNVPDIF 286
 Qy 301 YTVGGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 360
 Db 287 YTVPGQWTFAMJGTYNSGLNPLAFJNSFRFAFLIILCCDDERYRSILGQTVPC 346
 Qy 361 STITTSNGTHVLVDVCCQWSQCHPQATSEFLVAQPDIT 402
 Db 347 STITTSNGTHVLVDVCCQWSQCHPQATSEFLVAQPDIT 388
 RESULT 9
 US-09-826-509-436
 ; Sequence 436, Application US/09826509
 ; Publication No. US2003020473A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Rasmussen, Karin
 ; APPLICANT: Liaw, Chen W.
 ; TITLE OF INVENTION: No. US2003020473A1-Endogenous, Constitutively Activated Kmo
 ; TITLE OF INVENTION: No. US2003020473A1-Endogenous, Constitutively Activated Kmo
 ; FILE REFERENCE: ASEN-207
 ; CURRENT APPLICATION NUMBER: US/09/826,509
 ; PRIOR FILING DATE: 2001-04-05
 ; PRIOR APPLICATION NUMBER: 60/195,747
 ; PRIOR FILING DATE: 2000-04-07

[illegible]

RESULT 12
 US-09-626-509-445
 ; Sequence 445, Application US/09826509
 ; Publication No. US20030204073A1
 ; GENERAL INFORMATION: Buissena, Karin
 ; INVENTOR: Buissena, Karin
 ; APPLICANT: Liaw, Chen M.
 ; APPLICANT: Lin, I-tin
 ; TITLE OF INVENTION: No. US20030204073A1-Endogenous, Constitutively Activated
 ; TITLE OF INVENTION: Protein-Coupled Receptors
 ; PRIORITY: 2001-04-03
 ; CURRENT APPLICATION NUMBER: US/09/826,509
 ; CURRENT FILING DATE: 2001-04-03
 ; PRIORITY APPLICATION NUMBER: 60/195,747
 ; PRIORITY FILING DATE: 2000-04-07
 ; PRIOR APPLICATION NUMBER: 09/770,496
 ; PRIORITY APPLICATION NUMBER: 60-13
 ; NUMBER OF SEQ ID NOS: 599
 ; SOFTWARE: PatentIn Version 2.1
 ; SEQ ID NO 445
 ; LENGTH: 378
 ; TYPE: PRT
 ; ORIGIN: Homo sapiens
 ; US-09-626-509-445

Oy	241	OMLRGAGASERPSQADQHSTHRTTETAAKTCILIMGFCLCNAFPFVNVDFID	300
Oy	247	OMLRGAGASERPSQADQHSTHRTTETAAKTCILIMGFCLCNAFPFVNVDFID	306
Oy	287	OMLRGAGASERPSQADQHSTHRTTETAAKTCILIMGFCLCNAFPFVNVDFID	286
Dy	301	YTVFGOWATFMJLGYNSGLNPLVAFJNFJFRAFLIICDCDVRPISLOQTVC	360
Dy	287	YTVFGOWATFMJLGYNSGLNPLVAFJNFJFRAFLIICDCDVRPISLOQTVC	346
Oy	361	STTTINGSITHTVEDAVE	377
Dy	347	STTTINGSITHTVESGTE	363

RESULT 12
US-09-826-509-445
Publication No. US20030204073A1
GENERAL INFORMATION:
APPLICANT: Lehmann-Bruhlmeier, Karin
INVENTOR: Lehmann-Bruhlmeier, Karin
APPLICANT: Lda, I Chm M.
TITLE OF INVENTION: US20030204073A1-Endogenous, Constitutively Activated Receptors
CURRENT APPLICATION NUMBER: US/09/826,509
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 60/195,747
PRIOR FILING DATE: 1998-10-13
PRIOR APPLICATION NUMBER: 09/170,496
NUMBER OF SEQ ID NOS: 589
SEQUENCE LISTING: Sequence Listing version 2.1
SEQ ID NO 445
LENGTH: 378
TYPE: PNT
ORGANISM: Homo sapiens
US-09-826-509-445

Query Match	87.6%	Score 1869.5	DB 11:	Length 378
Best Local Similarity	92.8%	Prod. No. 1.4e+168		
Matches 360	Conservative 0	Mismatches 3	Indels 25	Gaps 2
1	MOKLDYNNVSEEGFQSVKVVFLPFLSTFLVLA	LZMLLWVAVQDQRLKNNYTV	60	
Qy	1	MOKLDYNNVSEEGFQSVKVVFLPFLSTFLVLA	LZMLLWVAVQDQRLKNNYTV	60
Db	1	MOKLDYNNVSEEGFQSVKVVFLPFLSTFLVLA	LZMLLWVAVQDQRLKNNYTV	60
Qy	61	SLAFADLLSLVCMFQALFLVQD	WVGVGVCLVRSVLDLWLTASTFPLCCITSLDRY	120
Db	61	SLAFADLLSLVCMFQALFLVQD	WVGVGVCLVRSVLDLWLTASTFPLCCITSLDRY	120
Qy	121	ALCCQDLYKVMYMTFLALMGQGVYTF	SEFLPMQNNNTGFLVLTASTFPLCCITSLDRY	120
Db	121	ALCCQDLYKVMYMTFLALMGQGVYTF	SEFLPMQNNNTGFLVLTASTFPLCCITSLDRY	120
Qy	131	ALCCQDLYKVMYMTFLALMGQGVYTF	SEFLPMQNNNTGFLVLTASTFPLCCITSLDRY	120
Db	131	ALCCQDLYKVMYMTFLALMGQGVYTF	SEFLPMQNNNTGFLVLTASTFPLCCITSLDRY	120
Qy	161	PLATKSVKVNQNNSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	240
Db	161	PLATKSVKVNQNNSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	240
Qy	170	-----LEKGVKNNQNNSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	226
Db	170	-----LEKGVKNNQNNSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	226
Qy	241	OMLAGRGLKSVKSVKSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	241
Db	241	OMLAGRGLKSVKSVKSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	241
Qy	227	OMLAGRGLKSVKSVKSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	227
Db	227	OMLAGRGLKSVKSVKSTYCPVKNQKFL	TCGVAFYFPLKMTANTAYVPAKSHAOI	227
Qy	301	YTPQGVQWVAFKQYINGLAFVLA	YAKKSPRAFLITLCCDQRTFRRLGLQVVC	360
Db	301	YTPQGVQWVAFKQYINGLAFVLA	YAKKSPRAFLITLCCDQRTFRRLGLQVVC	360
Qy	287	YTPQGVQWVAFKQYINGLAFVLA	YAKKSPRAFLITLCCDQRTFRRLGLQVVC	287
Db	287	YTPQGVQWVAFKQYINGLAFVLA	YAKKSPRAFLITLCCDQRTFRRLGLQVVC	287
Qy	361	STTTTTSSTTVLADVPCQDQSSQSC	368	
Db	361	STTTTTSSTTVLADVPCQDQSSQSC	368	
Qy	347	STTTTTSSTTVLADVPCQDQSSQSC	368	
Db	347	STTTTTSSTTVLADVPCQDQSSQSC	368	

121	ALCCDPAVYNNPNTDGLATMLGCGCWLPPTISLP	PMQNNNGITDLEBSLNGQLQD	180
126	ALCCDPAVYNNPNTDGLATMLGCGCWLPPTISLP	PMQNNNGITDLEBSLNGQLQD	185
131	ALCCDPAVYNNPNTDGLATMLGCGCWLPPTISLP	PMQNNNGITDLEBSLNGQLQD	190
136	ALCCDPAVYNNPNTDGLATMLGCGCWLPPTISLP	PMQNNNGITDLEBSLNGQLQD	195
141	PHAIKKKPNQNNSTNYCTPQNKQKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	240
146	PHAIKKKPNQNNSTNYCTPQNKQKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	245
151	PHAIKKKPNQNNSTNYCTPQNKQKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	250
156	PHAIKKKPNQNNSTNYCTPQNKQKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	255
161	PHAIKKKPNQNNSTNYCTPQNKQKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	260
166	PHAIKKKPNQNNSTNYCTPQNKQKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	265
171	---IKERKKNISNFCVPMWKNKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	270
176	---IKERKKNISNFCVPMWKNKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	275
181	---IKERKKNISNFCVPMWKNKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	280
186	---IKERKKNISNFCVPMWKNKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	285
191	---IKERKKNISNFCVPMWKNKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	290
196	---IKERKKNISNFCVPMWKNKPYATCSVPA	PTISPLMLGALYATVYTKAKHMOI	295
201	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	300
206	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	305
211	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	310
216	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	315
221	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	320
226	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	325
231	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	330
236	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	335
241	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	340
246	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	345
251	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	350
256	ONKQDAGASERSPQANQDTHURKPTKATKLTGI	MOCKPQWAPFTVTVDFIID	355
261	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	360
266	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	365
271	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	370
276	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	375
281	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	380
286	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	385
291	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	390
296	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	395
301	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	400
306	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	405
311	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	410
316	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	415
321	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	420
326	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	425
331	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	430
336	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	435
341	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	440
346	YTVQSGVAFKQYINSGALVAFYATFNSPRAFTI	ILCQDSEYBBSILGQTHVSC	445

361 SETTINGSTHVLVLAHQ 381
 366 SETTINGSTHVLVLAHQ 386
 371 SETTINGSTHVLVLAHQ 391
 376 SETTINGSTHVLVLAHQ 396
 381 SETTINGSTHVLVLAHQ 401
 386 SETTINGSTHVLVLAHQ 406
 391 SETTINGSTHVLVLAHQ 411
 396 SETTINGSTHVLVLAHQ 416
 401 SETTINGSTHVLVLAHQ 421
 406 SETTINGSTHVLVLAHQ 426
 411 SETTINGSTHVLVLAHQ 431
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 431 SETTINGSTHVLVLAHQ 451
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 536 SETTINGSTHVLVLAHQ 556
 541 SETTINGSTHVLVLAHQ 561
 546 SETTINGSTHVLVLAHQ 566
 551 SETTINGSTHVLVLAHQ 571
 556 SETTINGSTHVLVLAHQ 576
 561 SETTINGSTH

PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/328,314
 PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
 PRIOR FILING DATE: EARLIER FILING DATE: 1993-11-22
 PRIOR FILING DATE: EARLIER FILING DATE: 1993-11-22
 PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 07/996,772
 PRIOR FILING DATE: EARLIER FILING DATE: 1992-12-24
 NUMBER OF SEQ ID NOS: 19
 Patent in Ver. 2.1
 SEQ ID NO 15
 LENGTH: 261
 TYPE: PRT
 ORGANISM: Homo sapiens
 S-09-989-861-15

Query Match 56.14; Score 1239; DB 9; Length 261;
 Best Local Similarity 93.41; Pred. No. 5.3e-109; Indels 14; Gaps 1;
 Matches 234; Conservative 0; Mismatches 2;
 Y 127 LVYENQHTPLRIALMGCGWVPTTIFSFIPMOGNNIGIDL-----IEK 186
 b 1 LVYENQHTPLRIALMGCGWVPTTIFSFIPMOGNNIGIDL-----IEK 46
 Y 187 RFQNSNSTCYFVNKPVATCSVAVPIPLAVLAVRYVYTAKEHAQIOMLORA 246
 b 47 RFQNSNSTCYFVNKPVATCSVAVPIPLAVLAVRYVYTAKEHAQIOMLORA 106
 Y 247 GASSEKPOQADQSHMTTETKAANTLCIMGECCLCNAPFTNVDPPIDTVVQO 306
 b 107 GASSEKPOQADQSHMTTETKAANTLCIMGECCLCNAPFTNVDPPIDTVVQO 166
 Y 307 VMTAFMLGYNGLAPFLVAFLNKSFRAFLILCCDDERVPESILGQTVPCSTTIN 366
 b 167 VMTAFMLGYNGLAPFLVAFLNKSFRAFLILCCDDERVPESILGQTVPCSTTIN 226
 Y 367 GSHVLKRYTV 376
 b 227 GSHVLKRYTV 236

RESULT 15
 S-09-989-861-6
 Sequence 6, Application US/09999861
 Patent No. US2002081661A1
 Applicant: Gerald, Christophe
 Applicant: Hartig, Paul R.
 Applicant: Branchek, Theresa
 Applicant: Michael, Richard L.
 TITLE OF INVENTION: DNA Encoding 5-HT4 Serotonin Receptors And Uses
 FILE REFERENCE: 42667-AZ-PCT-US
 CURRENT APPLICATION NUMBER: US/09/989,861
 PRIOR APPLICATION NUMBER: 09/328,314
 PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-03
 PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/US93/12586
 PRIOR FILING DATE: EARLIER FILING DATE: 1993-11-22
 PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 07/996,772
 PRIOR FILING DATE: EARLIER FILING DATE: 1992-12-24
 NUMBER OF SEQ ID NOS: 19
 SOFTWARE: Patent in Ver. 2.1
 SEQ ID NO 15
 LENGTH: 178
 TYPE: PRT
 ORGANISM: Homo sapiens
 S-09-989-861-6

Query Match 44.01; Score 939; DB 9; Length 178;
 Best Local Similarity 92.21; Pred. No. 9.1e-81;
 Matches 177; Conservative 0; Mismatches 1; Indels 14; Gaps 1;
 Y 127 LVYENQHTPLRIALMGCGWVPTTIFSFIPMOGNNIGIDL-----IEK 186
 b 1 LVYENQHTPLRIALMGCGWVPTTIFSFIPMOGNNIGIDL-----IEK 46

Db 1 LVYENQHTPLRIALMGCGWVPTTIFSFIPMOGNNIGIDL-----IEK 46
 QY 187 RFQNSNSTCYFVNKPVATCSVAVPIPLAVLAVRYVYTAKEHAQIOMLORA 246
 Db 47 RFQNSNSTCYFVNKPVATCSVAVPIPLAVLAVRYVYTAKEHAQIOMLORA 106
 QY 247 GASSEKPOQADQSHMTTETKAANTLCIMGECCLCNAPFTNVDPPIDTVVQO 306
 Db 107 GASSEKPOQADQSHMTTETKAANTLCIMGECCLCNAPFTNVDPPIDTVVQO 166
 QY 307 VMTAFMLGYN 318
 Db 167 VMTAFMLGYN 178

Search completed, August 5, 2004, 13:41:22
 Job time : 48 secs

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% protein - protein search, using sw model

un on: August 5, 2004, 13:31:49, Search time 17.5 seconds

US-10-018-257A-2 2774.647 Million cell updates/sec

file: US-10-018-257A-2

effect score: 2133

sequence: 1 MKDLNVSSSGVSVEK.....ESQHPPTSPVNAQSQT 402

scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

sarched: 283366 seqs, 96191526 residues

total number of hits satisfying chosen parameters: 283366

inimum DB seq length: 0

aximum DB seq length: 2000000000

ut-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

database: PIR 78.*

1: PIR.*

2: PIR.*

3: PIR.*

4: PIR.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

result No.	Score	Query Match	DB ID	Description
1	1886	88.4	406	2 S55549
2	1789	82.9	387	2 S55550
3	1752	82.9	387	5-HTR4S receptor -
4	705	75.8	412	serotonin receptor
5	682	75.8	412	serotonin receptor
6	617	28.9	450	2 A55886
7	610	28.6	363	2 D50475
8	588.5	27.6	451	2 D50475
9	588.5	27.6	451	2 D50475
10	588.5	27.6	451	2 D50475
11	581.5	27.3	446	2 D50475
12	580	27.2	465	2 A55886
13	579	27.2	465	2 A55886
14	573.5	26.9	386	2 D50475
15	568	26.6	463	2 B56849
16	566	26.5	418	1 ORH782
17	562.5	26.4	475	2 A1271
18	562.5	26.4	475	2 A1271
19	562.5	26.4	487	1 DYH7D1
20	562	26.3	457	2 I51660
21	559	26.2	458	2 I51660
22	558	26.1	458	2 I51660
23	554.5	26.0	464	2 S12591
24	553.5	25.9	444	2 C55886
25	550	25.8	418	2 S00260
26	549	25.7	466	2 S36794
27	549	25.7	466	2 S36794
28	547	25.6	413	1 QHUB22
29	545.5	25.6	359	2 JH0449

beta-4C-adrenergic
beta-1-adrenergic
beta-1-adrenergic
histamine H2 recep
dopamine D1 recep
dopamine D2 recep
hypothetical prote
histamine H2 recep
G protein-coupled
serotonin receptor
serotonin receptor
alpha-1A-adrenergic
alpha-1A-adrenergic
serotonin receptor

ALIGNMENTS

RESULT 1
955549
serotonin 4 receptor - rat
C:Species: Rattus norvegicus (Norway rat)
C:Accession: S55549; S66494
C:Release: 10-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 24-Nov-1999
EMBL: U00001.1, 2806-2815, 1995
Article: The 5-HT(4) receptor: molecular cloning and pharmacological characterization o
A:Reference number: S55549; MUID:95317299; PMID:7796807
A:Accession: S55549
A:Accession: S55549
A:Molecule type: mRNA
A:Residues: 1-406 <GRR>
A:Cross-references: GB:U2907; NID:952460; PID:ANC52233.1; PID:924641
A:Cross-references: GB:U2907; NID:952460; PID:ANC52233.1; PID:924641
FSSS Lerr: 370, 215-231, 1995
Article: Expression of serotonin receptor mRNAs in blood vessels.
A:Reference number: S66487; MUID:95385798; PMID:7656980
A:Accession: S66487
A:Accession: S66487
A:Molecule type: mRNA
A:Residues: 95-259 <ULL>
A:Cross-references: EMBL:548153; NID:9584171; PID:CA88170.1; PID:9984172
A:Cross-references: EMBL:548153; NID:9584171; PID:CA88170.1; PID:9984172
C:Superfamily: vertebrate rhodopsin
C:Keywords: neurotransmitter receptor
Query Match
Similarity 88.4%, Score 1886, DB 2, Length 406;
Matches 357; Conservative 12; Mismatches 16; Indels 14; Gaps 1;
Qy 1 MKDLNVSSSGVSVEKVLFTVLAIIIGLNVAVNQRQAKNNFV 60
Db 1 MKDLNVSSSGVSVEKVLFTVLAIIIGLNVAVNQRQAKNNFV 60
Qy 61 SLAPADLVLPWPGFELVQDVIYGVFLVRLISLVLLTASTFLQCCISURY 120
Db 61 SLAPADLVLPWPGFELVQDVIYGVFLVRLISLVLLTASTFLQCCISURY 120
Qy 121 ACCCPVYNNPTPIALMGCGWVTFPIETPOANNIGIILERSLUNGGQD 180
Db 121 ACCCPVYNNPTPIALMGCGWVTFPIETPOANNIGIILERSLUNGGQD 180
Qy 181 PHATKRRKQNSSTYCVNKKVPAITSVWVYIPFLAVLVYVYATBAHQI 240
Db 181 PHATKRRKQNSSTYCVNKKVPAITSVWVYIPFLAVLVYVYATBAHQI 240
Qy 170 ---IERKPKNSSTYCVNKKVPAITSVWVYIPFLAVLVYVYATBAHQI 226
Db 170 ---IERKPKNSSTYCVNKKVPAITSVWVYIPFLAVLVYVYATBAHQI 226
Qy 241 QMLQKAGSSERQDQSHHRTETKANTLCIIMQCCFLQAPFVTVDDFID 300
Db 241 QMLQKAGSSERQDQSHHRTETKANTLCIIMQCCFLQAPFVTVDDFID 300
Qy 227 QMLQKAGSSERQDQSHHRTETKANTLCIIMQCCFLQAPFVTVDDFID 286
Db 227 QMLQKAGSSERQDQSHHRTETKANTLCIIMQCCFLQAPFVTVDDFID 286

[illegible]

Query Match
 Best Local Similarity 37.0%; Pred. No. 1.1e-45;
 Matches 130; Conservative 60; Mismatches 114; Indels 47; Gaps 9;

Qy 16 SVKVVLLTSTVLMALGNLWVAVQWQRLKIKNFVSLAPADLLSLVLP 75
 Db SVKVVLLTSTVLMALGNLWVAVQWQRLKIKNFVSLAPADLLSLVLP 75

Qy 20 SKKVLCTGLLITFTLGLTGVAVYKFEHLKSKVAFVSLASDLVAILNP 70
 Db SKKVLCTGLLITFTLGLTGVAVYKFEHLKSKVAFVSLASDLVAILNP 70

Qy 76 FGALVVDIMVGEVSLDGLVLTASILFHLGLSLVYALCCOPLVKNMP 135
 Db FGALVVDIMVGEVSLDGLVLTASILFHLGLSLVYALCCOPLVKNMP 135

Qy 80 WKATMIVGNPGR-FCNVWAPDLMGSTASILNLCVTSIDRYWAT-SSPFYERMP 137
 Db WKATMIVGNPGR-FCNVWAPDLMGSTASILNLCVTSIDRYWAT-SSPFYERMP 137

Qy 136 LRLALMGCVVITFTSLDVMQNNIGLIDLESLGQGLDFAVKEVKNQNS 195
 Db LRLALMGCVVITFTSLDVMQNNIGLIDLESLGQGLDFAVKEVKNQNS 195

Qy 138 KVACIMSVMTSLVSLFIPQVNL-----HKAQTSVIVE-LNG 176
 Db KVACIMSVMTSLVSLFIPQVNL-----HKAQTSVIVE-LNG 176

Qy 186 TY-----CPVKNVYATCSVAPYDELQVLYRIVTAKEMQLOKQ 247
 Db TY-----CPVKNVYATCSVAPYDELQVLYRIVTAKEMQLOKQ 247

Qy 197 TTAGDLPDNCSSLTATLSLSLSPFVPMIVYVYRQAQRIKRSLEAA 236
 Db TTAGDLPDNCSSLTATLSLSLSPFVPMIVYVYRQAQRIKRSLEAA 236

Qy 248 ANSSRPO-----SAQSHTHK-RREKAKTLCICIMQCFCLCNKQFVDPFT 299
 Db ANSSRPO-----SAQSHTHK-RREKAKTLCICIMQCFCLCNKQFVDPFT 299

Qy 237 ESNQNHNSGSLNSLSCSFNSFRKVLKATLVNGVFCVCLPFLNVPFC 296
 Db ESNQNHNSGSLNSLSCSFNSFRKVLKATLVNGVFCVCLPFLNVPFC 296

Qy 300 DY-----TFVQWNTAVLVYVINGVLPFLNVPFRAVFTILCC 343
 Db DY-----TFVQWNTAVLVYVINGVLPFLNVPFRAVFTILCC 343

Qy 297 EADDTDFPCISFTDFVFWGVWSSSLNPFIIV-NADFRKAFSLILCC 346
 Db EADDTDFPCISFTDFVFWGVWSSSLNPFIIV-NADFRKAFSLILCC 346

RESULT 9
 dopamine D1A receptor - African clawed frog (fragment)
 C:Species: Xenopus laevis (African clawed frog)
 C:Dates: 13-Sep-1996 #sequence_revision 13-Sep-1996 #ext_change 13-Aug-1999
 C:Accession: U51659; M01D:19024130; PMID:17937985
 A:Title: D1A, D1B, and D1C dopamine receptors from Xenopus laevis.
 A:Reference number: U51659; M01D:19024130; PMID:17937985
 A:Accession: U51659
 A:Status: preliminary; translated from GB/EML/DBD3
 A:Molecule type: DNA
 A:Residues: 51-489
 A:Cross-references: EMBL:X51659; NID:g559759; PDB:AAK50828.1; PDB:g559760
 A:Keywords: G-protein-coupled receptor
 C:Superfamily: vertebrate rhodopsin
 C:Keywords: G-protein-coupled receptor; glycoprotein; lipoprotein; neurotransmitter

Query Match
 Best Local Similarity 34.5%; Pred. No. 2e-45;
 Matches 146; Conservative 64; Mismatches 150; Indels 63; Gaps 13;

Qy 16 SVKVVLLT-----FLVYLMALGNLWVAVQWQRLKIKNFVSLA 63
 Db SVKVVLLT-----FLVYLMALGNLWVAVQWQRLKIKNFVSLA 63

Qy 7 SMDSEVLTRESSFVLGCGVSLSLTGLVNLCAVYRFLKSKVTFVFLSA 66
 Db SMDSEVLTRESSFVLGCGVSLSLTGLVNLCAVYRFLKSKVTFVFLSA 66

Qy 64 FADLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 123
 Db FADLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 123

Qy 67 VSDLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 124
 Db VSDLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 124

Qy 124 CQPLVYRNTPLTALMGCGVCPVTFISLFTPMQNN-----NIGLIDLESLGQGLD 180
 Db CQPLVYRNTPLTALMGCGVCPVTFISLFTPMQNN-----NIGLIDLESLGQGLD 180

Qy 125 SSPFVYERMPKVAFCVGVATLSLVLSRFPVQNLNKAFTSPDLNLIH----- 178
 Db SSPFVYERMPKVAFCVGVATLSLVLSRFPVQNLNKAFTSPDLNLIH----- 178

Qy 181 FRATKRFKFNQNSSTCVFVKNVYATCSVAPYDELQVLYRIVTAKEMQLO 240
 Db FRATKRFKFNQNSSTCVFVKNVYATCSVAPYDELQVLYRIVTAKEMQLO 240

Qy 179 -----DREDCNNSLAPATLSLSSFTFVPAIMVYVYRQAQRIKRS 227
 Db -----DREDCNNSLAPATLSLSSFTFVPAIMVYVYRQAQRIKRS 227

Qy 241 QMLOKQ-----SSSRPO-----RREKAKTLCICIMQCFCLCNKQF 289
 Db QMLOKQ-----SSSRPO-----RREKAKTLCICIMQCFCLCNKQF 289

Qy 228 SAKERLVYAKNCKNSLNSLQDQPPSSKRSFRKVLKATLVNGVFCVCLP 287
 Db SAKERLVYAKNCKNSLNSLQDQPPSSKRSFRKVLKATLVNGVFCVCLP 287

Qy 290 FVTVITDFID-----YTVQWNTAVLVYVINGVLPFLNVPFRAVFT 139
 Db FVTVITDFID-----YTVQWNTAVLVYVINGVLPFLNVPFRAVFT 139

Db 288 FLNLCVFCDELUTSGTEPFCSISSTDFVFWGVWSSSLNPFIIV-NADFRKAFSN 346
 Qy 340 ILCCDDERFVBSILQGVPCVCTVTKNSVNLKADA-VTCQWQSGQCPATPSLVAAQ 398
 Db 347 LLCC-----YLCPTSNII--FTVSINNGAVVYSCQPKSGIPNCLVYLPHALIC 400
 Qy 399 PED 401
 Db 401 PED 403

RESULT 10
 dopamine receptor D1 - human
 C:Species: Homo sapiens (man)
 C:Dates: 31-Dec-1992 #sequence_revision 31-Dec-1992 #ext_change 22-Jun-1999
 C:Accession: U51377; M01D:90370094; PMID:1468920
 A:Title: Cloning and expression of human and rat D(1) dopamine receptors.
 A:Reference number: U51377; M01D:90370094; PMID:1468920
 A:Accession: U51377
 A:Molecule type: DNA
 A:Residues: 1-446 <DE>
 A:Cross-references: EMBL:X55760; NID:g30396; PDB:CAA39286.1; PDB:g30397
 A:Keywords: G-protein-coupled receptor
 C:Superfamily: vertebrate rhodopsin
 C:Keywords: G-protein-coupled receptor; glycoprotein; lipoprotein; neurotransmitter

Query Match
 Best Local Similarity 33.7%; Pred. No. 7e-45;
 Matches 139; Conservative 67; Mismatches 135; Indels 71; Gaps 12;

Qy 7 NVSSRSGV-----KKVLLFTSLVLMALGNLWVAVQWQRLKIKNFV 60
 Db 7 NVSSRSGV-----KKVLLFTSLVLMALGNLWVAVQWQRLKIKNFV 60

Qy 5 NTSAGMGTGLVVERSVRLCATGLSLTSLTGLTTCVCAVTRFLRSLKTVFV 64
 Db 5 NTSAGMGTGLVVERSVRLCATGLSLTSLTGLTTCVCAVTRFLRSLKTVFV 64

Qy 61 SIAPADLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 120
 Db SIAPADLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 120

Qy 65 SIASDGLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 123
 Db SIASDGLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 123

Query Match
 Best Local Similarity 33.7%; Pred. No. 582.5; DB 1; Length 446;
 Matches 139; Conservative 67; Mismatches 135; Indels 71; Gaps 12;

Qy 7 NVSSRSGV-----KKVLLFTSLVLMALGNLWVAVQWQRLKIKNFV 60
 Db 7 NVSSRSGV-----KKVLLFTSLVLMALGNLWVAVQWQRLKIKNFV 60

Qy 5 NTSAGMGTGLVVERSVRLCATGLSLTSLTGLTTCVCAVTRFLRSLKTVFV 64
 Db 5 NTSAGMGTGLVVERSVRLCATGLSLTSLTGLTTCVCAVTRFLRSLKTVFV 64

Qy 61 SIAPADLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 120
 Db SIAPADLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 120

Qy 65 SIASDGLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 123
 Db SIASDGLLVNLVWVNGFAELVQDVIYGVWVCLVRSVLLVLTATPHLCCISLVY 123

[illegible]

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124  SPSFRYKTKVAFIMVAMTILSISLIPVQLM-----HK 163
184  IEKKNQNSNTY-----CYFVKVYATCSVAFYFELLVLAIVYVYAKH 236
164  AQOATSYTE-LNQTGYELPDPNCOSSLNRTAISISSIPYVAMLVYVYIAQK 222
217  AGLQWOLAGANSRSPQ-----SADQNSHTM--RTTKAANTCTICIGCCFLVAP 268
223  IRIISALSRANSAKNNHSGMNGNSMESSPQGFRETKVATLSVINGVFCVCLP 282
289  PFYTVIVDPTD-----YTPGQWTFELWYVNSGLAPFLVAFELNKSFFRFLI- 340
293  FVLNLCVQFVCPNMSDDFFCISGTFPDPVFWFGANSLNFIIVAF-NAUFRKAF 341
341  -----LCDDREVRSLILQGVCTSTTIL-----NGSTWGLDRAVGC 378
342  GCHRLCPGNSATEVNSNNNGSPETSOVQPKGQIPKBNNSNVIPHSILC 393

RESULT 8
18842  DB 098842 PRELIMINARY; PRT: 445 AA.
098842; 997 (TREMblrel, 02, Created)
01-FBR-1997 (TREMblrel, 02, Last sequence update)
01-JUN-2003 (TREMblrel, 24, Last annotation update)
Dopamine D1A2 receptor.
D1A2alpha anguilla (European freshwater eel).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
Anguilla.
131_TaxID=7936;
SEQUENCE FROM N.A.
MEDLINE=97160583; PUBMED=9006917;
Gardhaud B., Sugawara K.S., Coudouel S., Vincent J.D., Miznik H.B.,
"Early emergence of three dopamine D1 receptor subtypes in
vertebrates. Molecular phylogenetic, pharmacological, and functional
criteria defining DIA, D1B, and D1C receptors in European eel Anguilla
glabiosa."
J. Biol. Chem. 272:2718-2787(1997).
-1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
-1- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
GO: GO:0004891; 11; to membrane; IEA.
GO: GO:0004892; 7; Receptor activity; IEA.
GO: GO:0001584; 7; Rhodopsin-like receptor activity; IEA.
GO: GO:0004289; 7; Phosphatase activity; IEA.
GO: GO:0004508; 7; G-protein coupled receptor protein signalin...; IEA.
InterPro: IPR000276; GPCR_Rhodopsin.
InterPro: IPR000209; Peptidase_S8.
PRINTS: PR00237; GPCRBDOPSN.
PROSITE: PS00237; G PROTEIN RECP FL_1; 1.
PROSITE: PS00262; G PROTEIN RECP FL_2; 1.
PROSITE: PS00136; SUBSTRATE ASP; 1; Transmembrane.
SEQUENCE 445 AA; 49310 MW; 8433ADAB1C1C1439 CRC64;

Query Match 27.78; Score 591; DB 13; Length 445;
Best Local Similarity 36.24; Pred. No. 186-49;
Matches 112; Conservative 65; Mismatches 116; Indels 52; Gaps 10;

1  LDANVSSEFGSGVEKVVLLTFTVLMAILGNLWVAVCWDRQLKRTNFTVSLA 63
2  : : : : : : : : : : : : : : : : : : : : : : : : : : : :
3  9 LUGSLSDT-----SNVYLTCFSLSLVLLTGLVQVAFYKELKSNFTVSLA 65
4  : : : : : : : : : : : : : : : : : : : : : : : : : : : :
64  ADLLVAVLWMPKAVELVDIVMGVVRVTSLDVLTASIPLHLCISLDRYAIC 123
: : : : : : : : : : : : : : : : : : : : : : : : : : : :

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66  VEDLLVALWMPKAVETVAGCPFFGS-FCNIWAPDICTASTILALCIISVDYVAI- 123
124  CQVLVYVWVWVPLATKALGQGVVYPTFISFLPKVQGNHGIIGIDRELLAQGLGDPA 183
124  SPSFRYKTKVAFIMVAMTILSISLIPVQLM-----HK 163
184  IEKKNQNSNTY-----CYFVKVYATCSVAFYFELLVLAIVYVYAKH 236
164  AQOATSYTE-LNQTGYELPDPNCOSSLNRTAISISSIPYVAMLVYVYIAQK 222
217  AGLQWOLAGANSRSPQ-----SADQNSHTM--RTTKAANTCTICIGCCFLVAP 268
223  IRIISALSRANSAKNNHSGMNGNSMESSPQGFRETKVATLSVINGVFCVCLP 282
289  PFYTVIVDPTD-----YTPGQWTFELWYVNSGLAPFLVAFELNKSFFRFLI- 340
293  FVLNLCVQFVCPNMSDDFFCISGTFPDPVFWFGANSLNFIIVAF-NAUFRKAF 341
341  -----LCDDREVRSLILQGVCTSTTIL-----NGSTWGLDRAVGC 378
342  GCHRLCPGNSATEVNSNNNGSPETSOVQPKGQIPKBNNSNVIPHSILC 393

339  ILIQC 343
342  ILIQC 346

RESULT 9
10  OKK124 PRELIMINARY; PRT: 418 AA.
AC 0K124;
DT 01-OCT-2002 (TREMblrel, 22, Created)
DT 01-OCT-2002 (TREMblrel, 22, Last sequence update)
DT 01-JUN-2003 (TREMblrel, 24, Last annotation update)
DE Beta2-adrenergic receptor.
CN ADRE2.
OS Cavia porcellus (Guinea pig).
OC Chordata; Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
NCBI_TaxID=10141;
SEQUENCE FROM N.A.
STRAIN=Jubark Hartley;
Oostendorp J., Meurs H., Melemaas A., Zaagema J., Kauffman H.F.,
Postema D.S., Boddeke H.W.G.M., Biber K.P.;
"Pharmacological and pharmacological characterization of the Guinea
pig beta2-adrenergic receptor."
Submitted (MAY-2002) to the EMBL/Genbank/DBS databases.
EMBL; AL459814; CAD30869.1; -.
GO: GO:0016021; C-Integral to membrane; IEA.
GO: GO:0001584; 7; Rhodopsin-like receptor activity; IEA.
GO: GO:0007186; P-G-protein coupled receptor protein signalin...; IEA.
InterPro: IPR000276; GPCR_Rhodopsin.
Pfam: PF00001; 7; GPCR_Rhodopsin.
PROSITE: PS00237; G PROTEIN RECP FL_1; 1.
PROSITE: PS00262; G PROTEIN RECP FL_2; 1.
Receptor.
SEQUENCE 418 AA; 46591 MW; 10900DA1C94F00520 CRC64;

Query Match 27.48; Score 585.5; DB 11; Length 418;
Best Local Similarity 35.18; Pred. No. 1.2e-48;
Matches 146; Conservative 69; Mismatches 150; Indels 51; Gaps 14;

5  DANVSSEFGSGVEKVVLLTFTVLMAILGNLWVAVCWDRQLKRTNFTVSLA 64
21  DINVTREDDAVV-----VGMVAVLVLVIAVFGVNVITAIKAFELQTV-INFTTSLAC 77
: : : : : : : : : : : : : : : : : : : : : : : : : : : :
65  ADLLVAVLWMPKAVELVDIVMGVVRVTSLDVLTASIPLHLCISLDRYAIC 124
78  ADLVYVAVLWMPKAVELVDIVMGVVRVTSLDVLTASIPLHLCISLDRYAIC 136
125  OFATVYVWVWVPLATKALGQGVVYPTFISFLPKVQGNHGIIGIDRELLAQGLGDPA 184
137  SPSFRYKTKVAFIMVAMTILSISLIPVQLM-----YRAT 177

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286 LPFFILNCKWPCGSGTFFPCIDITFDFVFWGMSLSPVPIYAF-NADFRANSTVL 344
 341 LCCDDKVRREPLIGQVPCGTTINGSHVL 372
 345 LGC-----RLCPTFNAL--ETVSLNNGAV 370

RESULT 12
 Q18844 PRELIMINARY, PRT: 446 AA.
 Q18844: 01-FEB-1997 (TRENBlrel. 02, Created)
 DT 01-FEB-1997 (TRENBlrel. 02, Last sequence update)
 DT 01-JUN-2003 (TRENBlrel. 24, Last annotation update)
 DE Dopamine D1B receptor.
 GN D1B.
 OS Anguilla anguilla (European freshwater eel).
 CC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
 CC NCBTaxID:7936;
 [1]
 SEQUENCE FROM M.A. PubMed-9006917;
 EX MEDLINE-97160593; Coudouel S., Vincent J.D., Miznik H.B.,
 EA Cardinaud B., Sugamori K.S., Coudouel S., Vincent J.D., Miznik H.B.,
 EA Vernier P.;
 RA "early emergence of three dopamine D1 receptor subtypes in
 RA Anguilla anguilla: Molecular phylogenetic, pharmacological and functional
 RA criteria defining DIA, D1B, and D1C receptors in European eel Anguilla
 RA anguilla.";
 RU J. Biol. Chem. 272:2778-2787(1997).
 CC -1- SIMILARITY, BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
 DR EMBL; U62921; AAC60068.1; -
 DR GO; GO:0016021; G: integral to membrane; IEA.
 DR GO; GO:0001584; F: rhodopsin-like receptor activity; IEA.
 DR GO; GO:0001186; P: G-protein coupled receptor protein signalin. . .; IEA.
 DR HSP; P02699; IP88.
 DR InterPro; IPR000276; GPCR_Rhodopsn.
 DR Pfam; PF00001; 7tm_7; GPCR_Rhodopsn.
 DR PROSITE; PS00237; G-PROTEIN RECP FL 1; 1.
 DR PROSITE; PS0262; G-PROTEIN RECP FL 2; 1.
 DR G-protein coupled receptor; Receptor; Transmembrane.
 Q1 SEQUENCE 446 AA, 5084 MW, 5084.965082393 CkC64,
 Query Match 26.7%; Score 569; DB 13; Length 448;
 Best Local Similarity 37.9%; Pred. No. 5.5e-47;
 Matches 135; Conservative 59; Mismatches 114; Indels 32; Gaps 7;
 Y 26 LSTVILMALGNLWVAWCHQRLKINITYFVSLPADLLVLMVFPGLAEVQDI 85
 Y 32 LPILLVLTLCVAVITFPHRLKINITYFVSLPADLLVLMVFPGLAEVQDI 91
 Y 86 VYFVGLCVFVSLVLTATFPHLCCISLRYVAICCPVLYNMTLRLAKLGGC 145
 Y 92 MLGK-FCETWAPD-MGSAIILNCITISVRYWAI-APRFYEDKQRFVAFMGVA 149
 Y 146 WLPIETSPVMOGNHGIILDLRSNGLGDPAHLEKSNSTCYVKNPK 205
 Y 150 VTLTSLISPTVLMHKK-----AEEDYAD-----NSNMTDCASNET 191
 Y 206 VTLSCVAVYFVPELMLKAYVITVKEAMOTLQWQACASSESPQASQSTHFM 265
 Y 192 YALSLSLSISPIVPMVITGTYTRIAQOIRLSLEAVEGACQHQHPSDCANSL 251
 Y 266 RT-----ETNAKTCITNCCQCAAPFTNVDPTD-----TYTGQWATFML 314
 Y 252 NTFKFKETKVLKLSLIMGVFVLMFPFVLCNWPFFCDTGBIDPLVNSUSTFNFW 311
 Y 315 GTYISGLNAPFLYAFKSPFRAPFLIILCCD 344

Db 312 GWANSLNPIYAF-NADFRANSTVLGCN 340

RESULT 13
 Q18843 PRELIMINARY, PRT: 458 AA.
 Q18843: 01-FEB-1997 (TRENBlrel. 02, Created)
 DT 01-FEB-1997 (TRENBlrel. 02, Last sequence update)
 DT 01-JUN-2003 (TRENBlrel. 24, Last annotation update)
 DE Dopamine D1B receptor.
 GN D1B.
 OS Anguilla anguilla (European freshwater eel).
 CC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
 CC NCBTaxID:7936;
 [1]
 SEQUENCE FROM M.A. PubMed-9006917;
 EX MEDLINE-97160593; Coudouel S., Vincent J.D., Miznik H.B.,
 EA Cardinaud B., Sugamori K.S., Coudouel S., Vincent J.D., Miznik H.B.,
 EA Vernier P.;
 RA "early emergence of three dopamine D1 receptor subtypes in
 RA Anguilla anguilla: Molecular phylogenetic, pharmacological and functional
 RA criteria defining DIA, D1B, and D1C receptors in European eel Anguilla
 RA anguilla.";
 RU J. Biol. Chem. 272:2778-2787(1997).
 CC -1- SIMILARITY, BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
 DR EMBL; U62920; AAC60070.1; -
 DR GO; GO:0016021; G: integral to membrane; IEA.
 DR GO; GO:0001584; F: rhodopsin-like receptor activity; IEA.
 DR GO; GO:0001186; P: G-protein coupled receptor protein signalin. . .; IEA.
 DR InterPro; IPR000276; GPCR_Rhodopsn.
 DR Pfam; PF00001; 7tm_7; GPCR_Rhodopsn.
 DR PROSITE; PS00237; G-PROTEIN RECP FL 1; 1.
 DR PROSITE; PS0262; G-PROTEIN RECP FL 2; 1.
 DR G-protein coupled receptor; Receptor; Transmembrane.
 Q1 SEQUENCE 458 AA, 5194 MW, 5194.97765357 CkC64,
 Query Match 26.4%; Score 564; DB 13; Length 458;
 Best Local Similarity 35.4%; Pred. No. 1.7e-46;
 Matches 141; Conservative 63; Mismatches 148; Indels 46; Gaps 12;
 Y 9 SSSGPGGKVKVLLT--FLSTVILMALGNLWVAWCHQRLKINITYFVSLAPA 65
 Y 30 SAKTQDKKLVLTVTYGVQDILHVLVLTLLGLNLCVAVLPHRLKINITYFVSLAVS 89
 Y 66 DLVSLVLMVFPGLAEVQDIHVGVEVFLVLTSLVLTATFPHLCCISLRYVAICQ 125
 Y 90 DLFAVLMVFPKVAEAVATVPDP-FCNIVAFDMSGTASILNCITISVRYWAI--SS 147
 Y 126 PLVYVMTETLALMGKGVLTFTFSPITFMOGNHGIILDLRSNGLGDPAHLE 185
 Y 148 PRFRKQRTQVAFVSLTSLVLSLISPTVLMHKKAS--DEWVIT---GTSP--- 198
 Y 186 KKKFNQNTSYCPNKPWTATQSVAVYFVPELMLKAYVITVKEAMOTLQWQAC 245
 Y 199 -----GKSENCDSLRALSLSISPIVPMVITGTYTRIAQOIRLSLEJER 252
 Y 246 AGASSS---RQSDAQDQITER--NPTNKAANTCTICMCPCLCNAPFTNVDPTD 300
 Y 253 AAEHAGRCNTEKQCHNTLKTSLKSKTKVLSLIMGVFVLMFPFVLCNWPFFCD 312
 Y 301 YTS-----TYGQWATFMLKAYISGLNAPFLYAFKSPFRAPFLIILCCDQK 350
 Y 313 RPTTFHAGLPCVSDTFTVFWGNSLNVAF-NADFRAPASLGLCRFCSRT 371
 Y 351 P-----SILGQVTPCSTT-----INGSTHVRDAVEK 378
 Y 372 PFTVWNLSELVSNQTLFPHKEITVAVNMKPNVDC 409

